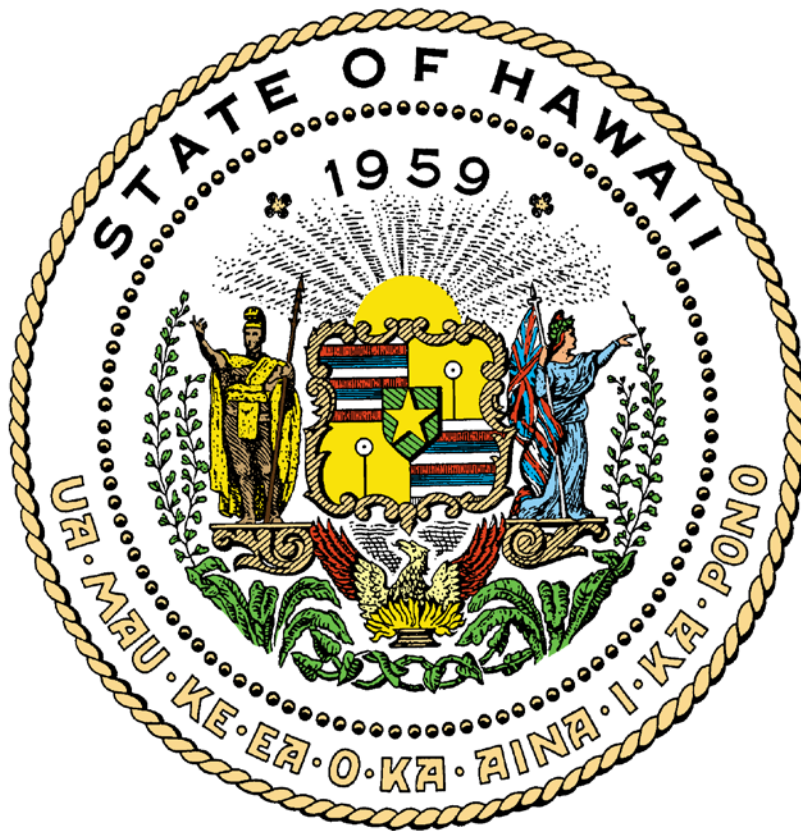


# Report to the 2012 Hawai‘i State Legislature

## Lead By Example State of Hawai‘i Agencies’ Energy Initiatives FY 2010-2011



State of Hawai‘i  
Department of Business, Economic Development & Tourism  
January 2012

This report and the original agency submissions in accordance with Section 93-16, Hawai'i Revised Statutes.

<http://energy.hawaii.gov/programs/achieving-efficiency/lead-by-example>

Hawai'i Department of Business, Economic Development, and Tourism. Strategic Industries Division.

Sate of Hawai'i agencies energy initiatives: leading by example, FY2010-2011. Honolulu: 2011-.

Report to the 2012 Hawai'i State Legislature

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## EXECUTIVE SUMMARY

The Lead By Example (LBE) initiative began in 2006 in response to legislative and executive mandates to make government buildings, fleets, and personnel practices leaders in energy efficiency and conservation. These efforts acknowledge the high cost of electricity in Hawai‘i; the energy security benefits of implementing alternative fuel use; and the many opportunities for increasing energy efficiency in new and existing state offices, facilities and schools. The legislation also required incorporating environmentally preferable purchasing into state operations. Fully implemented, the LBE initiative represents an important step in achieving long-term economic and environmental benefits for the state.

This report addresses State agency activity during the fiscal year 2010-2011. In September 2010, four years after initiating LBE, the American Council for an Energy-Efficient Economy (ACEEE) nationally announced our LBE Program as part of their “18 State-Led Energy Efficiency Programs Recognized As Best In U.S.” and that Hawai‘i was one of four states in the “Five Top Energy-Efficiency Award Winning Programs.” The State’s LBE Program also was recognized by the Energy Services Coalition (ESC), a national organization supporting performance contracting, for our work on performance contracting.

During FY11 state agencies’ energy consumption increased minimally by 0.6% above FY10 levels, but the state paid 17.1 %, more than FY10. When comparing FY11 figures against the 2005 baseline year, energy consumption dropped 4.6%, but, due to the increasing cost for electricity, costs rose 62.3%.

Year-to-year figures from the beginning of LBE are as follows:

- FY05-FY06: consumption increased 2.4% (16M kWh), costs increased 24% (\$25M)
- FY06-FY07: consumption increased 1.1% (8M kWh), costs increased 3.1% (\$4M)
- FY07-FY08: consumption decreased 0.1% (-1M kWh), costs increased 21.8% (\$30M)
- FY08-FY09: consumption decreased 5.7% (-40M kWh), costs increased 1.2% (\$2M)
- FY09-FY10: consumption decreased 2.8% (-18M kWh), costs decreased 12.1% (-\$20M)
- FY10-FY11: consumption increased 0.6% (2M kWh), costs increased 17.2% (\$25M)

Overall, from baseline year 2005:

- FY05-FY11: consumption decreased 4.6% (-31M kWh), costs increased 62.3% (\$65M)

As seen above, the slight consumption increase in FY11 ended the downward trend of the previous three years. It should be noted that a number of new projects came on-line in FY11, contributing to nearly half of the rise in overall consumption. New buildings and the energy costs associated with this growth highlight the importance of energy efficiency and renewable energy development. A primary objective of Lead By Example is to protect the state against escalating energy costs and to expedite energy security to protect Hawai‘i and our economy against the volatility of world oil markets.

Over the years, costs closely have mirrored the rise and fall in the price of oil and electricity and FY11 demonstrated the extent to which price hikes negatively affect our economy. While electricity consumption increased by just over half a percent from FY10, state agencies paid \$25M more than in FY10, a 17.2% increase. Comparisons to the baseline year illustrate the challenge state agencies still face and highlight the importance of continued efforts to pursue energy efficiency and renewable energy opportunities.

State of Hawai‘i executive branch agencies have led by example and were active during fiscal year 2011 with several energy conservation and renewable energy generation projects. Retrofitting existing buildings for energy efficiency and modifying operations strategies were the primary contributors to reducing electrical consumption and cost, but progress also was made in green building design, environmentally preferable purchasing, transportation and the adoption of renewable energy. Some highlights follow.

### *Efficiency*

- The Department of Accounting and General Services (DAGS) completed construction for a \$33.4 M Phase I energy savings performance contract (ESPC) for ten (10) buildings in the Capitol District. DAGS also executed a contract for a Phase II ESPC, which will cover an additional 33 buildings.
- The Department of Transportation (DOT) issued an RFP for an ESPC covering fifteen (15) airports, five (5) harbors, and highways facilities.
- The University of Hawai‘i Community Colleges (UH-CC) have all started construction for a performance contract that will implement major energy conservation measures in their portfolio of buildings. Estimated savings are 18M kWh and \$4.5M annually over the 20-year contract.
- The Department of Public Safety (PSD) recently entered a Guaranteed Energy Savings Agreement for the O‘ahu Community Correctional Center and the Halawa Correctional Facility, which will retro commission a number of energy-savings measures at these facilities that will result in annual energy savings of nearly \$2 million over the next twenty years.

### **Energy Savings Performance Contracting**

The Energy Services Coalition, a national nonprofit organization dedicated to supporting performance contracting, recognized the State of Hawai‘i as first in the nation in Energy Savings Performance Contracting (ESPC) for State Building Efficiency. To date, over \$159 million has been invested in both State and County ESPCs with cost savings expected to grow to more than \$328 million over the 20-year life of the contracts. DBEDT has provided technical assistance to agencies for projects dating back to 1996.

- The Department of Hawai‘ian Homelands (DHHL) has completed a number of large energy-efficient residential development projects. The 403-unit Kanehili Subdivision in East Kapolei is still under construction, with approximately 276 families moved in. Ka‘ūpuni Village, DHHL's Leadership in Energy and Environmental Design (LEED) Platinum subdivision, completed construction in March 2011, which consists of 19 affordable, net zero energy homes in Wai‘anae, O‘ahu. The 19 families moved in on May 2011. The Kumuhau Subdivision, which 33 of 45 native Hawai‘ian families have moved in, is a LEED Silver project that will contain notable green features, which are standard in all homes.
- The Hawai‘i Health Systems Corporation (HHSC) has incorporated co-generation plants to offset electrical and heating cost for the Samuel Mahelona Memorial Hospital and West Kaua‘i Medical Center facilities.
- DOT Airports Division (DOT-Air) replaced the Diamond Head Chiller Plant and the Oversea Chiller Plant project is under construction, which will contain new energy-efficient equipment. At Honolulu International Airport, there is an Energy Monitoring and Control System to turn off lights in areas that are not in use and reduce or eliminate air conditioning in these same areas.
- 19 O‘ahu Facilities were benchmarked by DAGS and eight (8) facilities were certified and received an ENERGY STAR® Plaque.
- UH Mānoa completed a full benchmarking using ENERGY STAR® Portfolio Manager of all campus buildings over 5,000 square feet or that use more than 8,000 kWh annually.
- The Department of Education (DOE), in partnership with the University of Hawai‘i, College of Tropical Agriculture and Human

## ENERGY STAR® Benchmarking

Benchmarking is a process which involves calculating the building’s annual energy consumption per square foot, allowing buildings to be compared and identifying areas for improving energy efficiency. To date, 172 state facilities have been benchmarked using the ENERGY STAR® Portfolio Manager online tool.

If a building receives a score of 75 or higher, it indicates that the building is in the top 25% of similar buildings nationally and can be certified as an ENERGY STAR® building. To date, 18 state buildings have received the ENERGY STAR®.

## ENERGY STAR® Certified State Buildings

- AAFES Building\*
- Abner Paki Hale Courthouse
- Ala Moana Health Center
- Diamond Head Health Center
- Hilo State Office Building
- Ho‘opono\*
- Kakuhihewa Building (Kapolei State Building)\*
- Kāne‘ohe Elementary School
- Kāne‘ohe Civic Center\*
- Ke‘elikolani Building
- Keoni Ana Building\*
- King Kalākaua Building\*
- Leeward Health Center
- Leiopapa A Kamehameha Building (State Office Tower)\*
- OR&L Main\*
- State Capitol Building
- Wahiawā Civic Center\*
- Waipahu Civic Center\*

\*Received ENERGY STAR® certification in multiple years

Resources (CTAHR), was awarded an Environmental Protection Agency (EPA) Grant that will focus on best practices for school landscape management as a pilot study for three (3) DOE schools on O‘ahu. During the 18 month grant, irrigation water benchmarking will be included, along with a sample food waste audit.

- The Hawai‘i Housing Finance and Development Corporation (HHFDC) installed a new Heating, Ventilation, and Air Conditioning (HVAC) plant during renovations at Kamake‘e Vista that is equipped with a heat recovery system to heat hot water for the laundry facility that accommodates the two hundred twenty six (226) residential units.
- A total of 53 workshops and other events relating to LBE topics were held in FY11, attracting at least 5,344 participants, including many from state agencies. In some cases, the Department of Business, Economic Development, and Tourism (DBEDT) provided funds so that other agencies’ staff members could attend the training.

### Capitalizing on Energy Efficiency Incentives

State agencies have received more than \$6.05 million in efficiency rebates since 1996 from the Hawai‘ian Electric Company (HECO) and its subsidiaries and from Hawai‘i Energy. These rebates combined have resulted in estimated cumulative dollar savings of over \$128 million and electricity savings of 619 million kilowatt-hours.

Over the life of the equipment, the savings will be equivalent to approximately 148,000 households’ annual electricity use. In FY11 state agencies received \$733,349 in rebates, the highest rebate total of any year.

- DBEDT was awarded U.S. EPA Pollution Prevention (P2) funding to establish a green workforce development program that will expand DBEDT’s existing Hawai‘i Green Business Program and Lead By Example Resource Conservation Program, two programs designed to help businesses and government agencies green their operations through the reduction of energy, water, and resource consumption.
- The Attorney General (AG) along with Department of Tax (DoTAX) and Department of Labor and Industrial Relations (DLIR) hosted a recycling event, Aloha ‘Aina Earth Day, to dispose of broken furniture and recycling materials at no cost to the State.

### *Renewable Energy*

- University of Hawai‘i (UH) campuses have installed or are actively installing several solar PV projects with a combined capacity of 761 kW, and the UH Mānoa campus is currently in the design phase to install an additional 5 MW of PV in FY2012. Additionally, UH Maui College has installed a 1.2 kW wind turbine system.
- DAGS is currently working on a number of photovoltaic system projects including a 100 kW PV system at the DAGS Central Services Division baseyard in Mapunapuna and at four state buildings in Honolulu. A project at the No. 1 Capitol Building will



be installing an innovative use of PV cells into a glass art canopy as part of the Courtyard renovation.

- DAGS installed a 236 kilowatt (kW) PV system for the Kalanimoku Building located in the Capitol District.
- The Hawai‘i State Public Library System (HSPLS), working with DAGS, is constructing or has completed construction of six photovoltaic system projects at six public libraries.
- The Department of Agriculture (DOA) is working on three renewable energy projects; the Moloka‘i and Waimea hydropower projects and a project for the installation of a photovoltaic system at a livestock slaughterhouse on O‘ahu.
- DHHL will start construction soon on the largest Micro-scaled Concentrating Solar Power project in the State of Hawai‘i. The Kalaeloa Solar One project will produce 5 MW of renewable energy for the island of O‘ahu.
- DOT Airports Division has been working with Highway, Harbors, Foreign Trade Zone and UH to contract a Power Purchase Agreement (PPA) of Photovoltaic systems over existing facilities. The awarded PPA locations in Design phase include Lāna‘i Airport, Kona International Airport, Waimea Kohala Airport, and other facilities.

### **DOT-Airports Power Purchase Agreement**

DOT-Airports signed a 20-year power purchase agreement in 2009 for a total of seven (7) photovoltaic systems totaling 901 kW of capacity.

Through a second round of power purchase agreements in 2011, DOT-Airports awarded development of photovoltaic renewable energy generation systems at 15 sites. Seven (7) power purchase agreements have been signed for a total capacity of 606 kW. The remaining eight (8) are pending, but are planned for an additional 2.69 MW.

### **Transportation**

#### **Electric Vehicles**

The State of Hawai‘i has started to adopt electric vehicles (EVs) into the state fleet. Through the EV Ready Program, funds were allocated to DAGS for the purchase of six (6) EVs for the state motor pool and for charging stations. DBEDT and NELHA also have EVs.

Under the EV Ready Program, three (3) private charging stations and two (2) public charging stations were installed.

- State vehicles are already utilizing E-10 Unleaded gasoline which contains 10% ethanol. State law requires its sale. Many state vehicles are also flexible-fuel capable, and can use a higher percentage of ethanol.
- DAGS added six (6) electric vehicles to the motor pool fleet.
- Windward CC recently purchased two flexible fuel sedans and one cargo van replacing older vehicles that were not as energy efficient.

- UH Mānoa initiated a fleet replacement program employing EPA grants to replace four of its heavy trucks with new clean diesel trucks which are bio-diesel compatible. UH Mānoa also initiated an electric vehicle replacement program for older Internal Combustion Engine (ICE) vehicles replacing three ICE vehicles with EVs.

### ***Purchasing Practices***

- Most departments already use life-cycle cost analyses, purchase efficient equipment such as those with the ENERGY STAR® label, and take advantage of utility rebates.
- The State Procurement Office (SPO) continues to provide price and vendor listings which include ENERGY STAR®, recycled, or environmentally preferred products.
- Information on recycled and environmentally preferable products (EPP) has been prepared by DBEDT. Lead By Example, in partnership with the SPO, also has hosted trainings on EPP that are available to state employees.
- UH Mānoa has a dining and food service recycling and bio-based program, with over 80% of all paper goods used by UH Mānoa Buildings Services coming from recycle paper products.
- An annual survey designed to track the environmentally preferable purchasing practices of state agencies is coordinated by the Department of Health’s Office of Solid Waste Management. The results show that state agency EPP in 2010 lead to greenhouse gas (GHG) savings equivalent to removing approximately 93 passenger vehicles from roadways for one year and energy savings equal to conserving about 17,188 gallons of gasoline in a year.

### **High Efficiency Appliances for HHFDC Properties**

HHFDC requires that all appliances installed in residential apartments have the highest ENERGY STAR® rating possible. This stipulation also has been placed in laundry vendor contracts since all power used is a direct operating expense.

### ***Leadership in Energy and Environmental Design (LEED)***

Hawai‘i remains a member of the U.S. Green Buildings Council (USGBC), the non-profit entity which administers the LEED program. DAGS is developing LEED application guidelines to be used by state agencies. There are currently 30 LEED Accredited Professionals on staff at five state agencies; DAGS, DBEDT, DOE, DOT and UH. Others are in training for this goal. DBEDT continues to offer LEED training opportunities for state agency staff.

## State of Hawai'i LEED Certified Buildings

Six years ago, there was only one LEED Accredited Professional (AP) working for the state. Now, there are 30 LEED APs and the state requires all new construction and major renovation to meet LEED Silver standards.

To date, ten state facilities have been certified as meeting LEED standards or have been completed and are awaiting certification by USGBC:

### LEED Platinum

- Natural Energy Laboratory of Hawai'i Authority Gateway Energy Center

### LEED Gold

- UH Hilo Student Life Complex
- UH Mānoa Center for Microbial Oceanography Research and Education
- North Kohala Public Library

### LEED Silver

- Frear Hall Residence Housing
- 'Ewa Makai Middle School
- Honolulu International Airport Lounge for LEED-Commercial Interiors

### LEED Certified

- Waipahu Intermediate School Cafeteria
- UH Hilo 'Imiloa Astronomy Center of Hawai'i
- UH-Mānoa John A. Burns School of Medicine

A significant number of additional buildings which are anticipated to meet LEED Silver standards or better are either being planned or are in the design phase. The following state facilities are currently under construction or construction bids have been awarded, and are expected to be rated by LEED:

- Mānoa Public Library (Silver)
- UH Hilo Sciences and Technology Center (Silver)
- UH Hilo Hawai'ian Language Building (Silver)
- UH Hilo Student Services Building (Silver)
- UH West O'ahu New Campus Development (Silver)
- UH Mānoa Campus Center (Silver)
- UH Mānoa Cancer Research Center of Hawai'i (Gold)
- Maui Community College Science Facility (Silver)
- Windward Community College Library and Learning Center (Silver)
- Hawai'i Community College Hale Aloha (Silver)
- Keaukaha Military Reservation (Silver)
- Baldwin High School Library (Silver)

DBEDT in coordination with DAGS and a number of other departments with offices in the Leiopapa A. Kamehameha Building (State Office Tower) are working to achieve LEED Silver or Gold certification for the building under the LEED for Existing Buildings: Operations and Maintenance (LEED EBOM) program, which implements green strategies, technologies, and operations in existing buildings. If certified, the project would be the first LEED EBOM project for a state facility and the second overall LEED EBOM project in the state.

## **LEAD BY EXAMPLE: STATE OF HAWAI‘I EXECUTIVE AGENCIES’ ACHIEVEMENT IN ENERGY**

This report responds to legislative and executive mandates issued in 2006, which require state agencies to implement a variety of energy programs now known as the Lead By Example (LBE) initiative. A number of requirements were established by Act 96, SLH 2006, Part III, which reflects Administrative Directive 06-01, issued on January 20, 2006. Act 96 directs state agencies to improve energy, water and resource efficiency in state facilities, increase fuel efficiency, and use alternative fuels in state vehicles with the goal of stimulating growth today that will rebuild the local economy and realize savings far into the future.

In addition, we are continuing with the requirements of Act 160, Section 168.5, SLH 2006, to report state agencies’ electricity consumption, the steps taken to reduce energy use, and their plans for future reductions. Although not mandated by law, the costs of purchasing utility electricity also have been compiled.

This LBE report provides data on electricity use and costs, as well as highlights of state agencies’ energy activities under the LBE initiative. Executive agencies were invited to submit reports containing information required by law; these reports have been consolidated by the Department of Business, Economic Development, and Tourism (DBEDT). The consolidated reports are attached and list all agencies’ actions.

The LBE effort was kicked off at a meeting of all cabinet members, convened by DBEDT, on May 11, 2006. Since that initial meeting, agencies developed a framework for planning, implementing and reporting energy efficiency activities. State agency personnel have been trained and received technical assistance as needed. The agencies have set energy-savings targets and are developing tools which will enable their goals to be reached.

Agency representatives formed a Lead By Example Leadership Group to coordinate these actions, supported by three Working Groups. These Working Groups address Buildings, Transportation, and Environmental Practices and Procurement. Each Working Group develops plans and recommendations to be reviewed by the Leadership Group, which is composed of high-level representatives of executive departments and the University of Hawai‘i. The Leadership Group members have the authority to ensure efficient communication and the commitment to develop effective policies and plans for each department.

### **The LBE Initiative**

Fiscal year 2011, the sixth year of the Lead By Example initiative, was impacted by the ongoing economic recovery, limited state budget, and steadily rising world oil prices. Combined, these factors highlighted the importance of LBE and the program’s intent of transforming how state agencies use energy and resources in operations, facilities, and transportation.

New state buildings are being designed and constructed to higher efficiency standards and existing buildings are receiving equipment retrofits and are being retro-commissioned to ensure proper operation of energy systems. Several agencies are moving forward with performance contracting for groups of buildings and incorporating renewable energy technologies, such as photovoltaics (PV), in projects.

Consistency in data collection and accuracy in recordkeeping have been some of the challenges of the LBE initiative. Starting in 2008 electricity consumption and billing information, with approval by all agencies, was acquired directly from the utilities to be compiled and maintained by statisticians in DBEDT's Research and Economic Analysis Division (READ). Before 2008 each agency provided data from their own records. Compiling data from 26 agencies was less consistent than obtaining data from a sole source such as the utility. READ also requested utility data from before 2008 going back to 2005, the baseline year for LBE. As expected, there were slight discrepancies between the utility and agency data going back to 2005. Starting with the FY09 report, utility data was used for all years of the LBE initiative to provide a standard of consistency that did not exist in previous reports. Fiscal Year 2005 continues to serve as the baseline year and all data have been updated to reflect this new standard.

### **Lead By Example Training Opportunities**

Executive agencies continued training their personnel in subjects such as building commissioning, performance contracting, financing, green building design and construction, energy-efficient equipment, and renewable energy generation. A total of 53 workshops and other events relating to LBE topics were held in FY11, attracting at least 5,344 participants, including many from state agencies. In some cases, DBEDT provided American Recovery and Reinvestment Act (ARRA) funds so that other executive agencies' staff members could attend the training.

This report summarizes the achievements and activities of executive agencies as they "Lead By Example" in 2011. The 28 participating agencies include:

- Department of Accounting and General Services (DAGS)
- Department of Agriculture (DOA)
- Department of the Attorney General (AG)
- Department of Budget and Finance (B&F)
- Department of Business, Economic Development and Tourism (DBEDT)
- Department of Commerce and Consumer Affairs (DCCA)
- Department of Defense (DOD)
- Department of Education (DOE)
- Department of Hawai'ian Home Lands (DHHL)
- Department of Health (DOH)
- Department of Human Resources Development (DHRD)
- Department of Human Services (DHS)

Department of Labor and Industrial Relations (DLIR)  
Department of Land and Natural Resources (DLNR)  
Department of Public Safety (PSD)  
Department of Taxation (DoTAX)  
Department of Transportation—Airports Division (DOT-Air)  
Department of Transportation—Harbors Division (DOT-Har)  
Department of Transportation—Highways Division (DOT-Hwy)  
Foreign Trade Zone (FTZ)  
Hawai‘i Community Development Authority (HCDA)  
Hawai‘i Health Systems Corporation (HHSC)  
Hawai‘i Housing Finance and Development Corporation (HHFDC)  
Hawai‘i Public Housing Authority (HPHA)  
Hawai‘i State Public Library System (HSPLS)  
Hawai‘i Tourism Authority—Convention Center (HTA/CC)  
Natural Energy Laboratory of Hawai‘i Authority (NELHA)  
University of Hawai‘i System (UH)

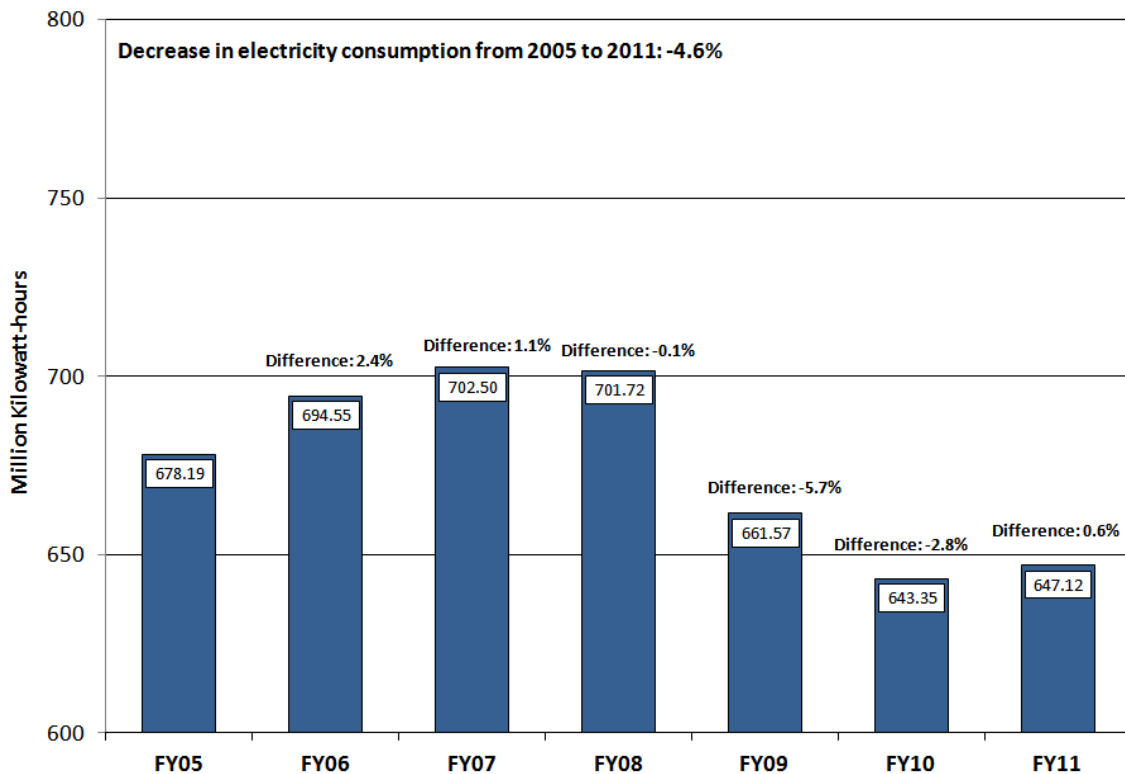
**Executive Agency Electricity Consumption**

In 2011 agencies consumed 647 million kilowatt-hours (kWh) of electricity, almost 3 million kWh more than in FY10, which was the lowest annual total since the Lead By Example initiative began. State agencies have lowered electricity consumption by 56 million kWh, or 7.9%, since it peaked in 2007 at 702 million kWh. In baseline year 2005, agencies used 678 million kWh. Initially, consumption increased 2.4% in 2006 and another 1.1% in 2007. The drop of 0.1% in 2008 marked the first decrease from a previous year and signaled that energy conservation efforts were beginning to impact overall consumption. With the 5.7% drop in consumption for 2009, the state achieved its largest single-year decline and realized the first real decrease in consumption, dropping 2.5% below 2005 baseline levels. The 2.8% reduction in 2010 continued the downward trend and the slight 0.6% uptick in 2011 brought total agency consumption to 4.6% below the 2005 baseline levels, a savings of 31 million kWh. Electricity use for State of Hawai‘i executive agencies is depicted in Figure 1.

**New Facilities' Energy Impact**

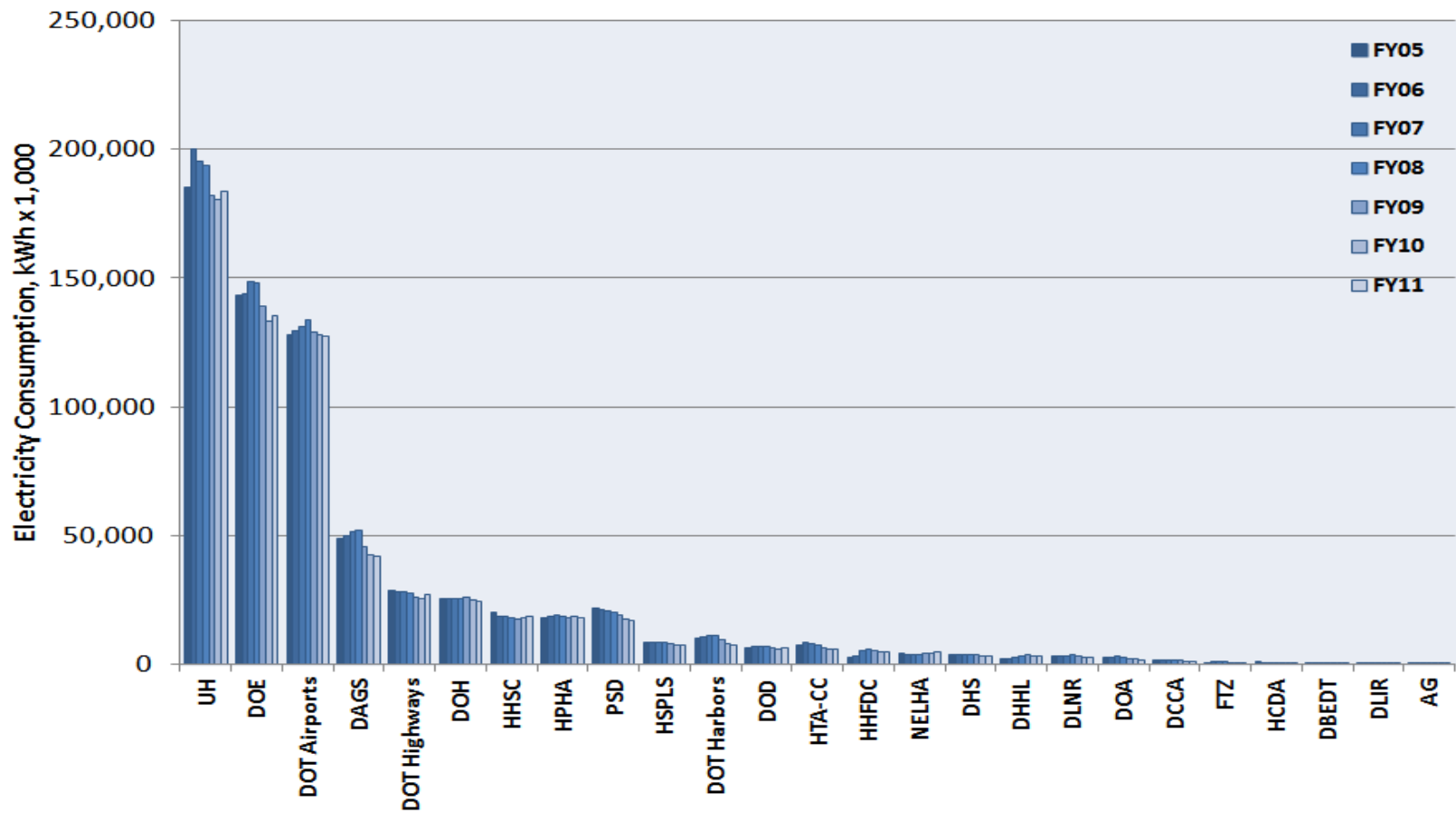
In FY11 electricity consumption increased by 0.6% over FY10. Half of the increased consumption was a result of new facilities coming on-line. New meters accounted for 1.8 million kWh, or approximately 49% of the 3.7 million kWh increase in FY11. Even with the slight increase, agency consumption remains 4.6% below the 2005 baseline year.

**Figure 1: Comparison of State Agencies' Electricity Consumption in kWh**



Energy use varies widely within individual agencies. In 2011 most agencies reported reductions in energy use; others noted minimal increases and a few used significantly more electricity. Four agencies account for most of the electricity used by the executive branch: the University of Hawai'i (UH) campuses, the Department of Education (DOE), the Airports Division of the Department of Transportation (DOT-Air), and the Department of Accounting and General Services (DAGS). UH and DOE both experienced increases of 1.7%, while DOT-Air and DAGS managed decreases of 0.3% and 1.4%. From FY05 to FY11, 22 executive agencies were able to decrease their electricity consumption as opposed to 18 in FY10. Each agency's year-by-year kWh consumption is summarized in Figure 2.

**Figure 2: Comparison of kWh Consumption by Agency by Year**





Tables 1 and 2 provide information on individual agencies' electricity consumption and the changes from year to year since FY05. The reported number of kilowatt-hours consumed annually is provided in Table 1, while Table 2 presents the differences among years in kWh as well as percentage change. It should be noted that several agencies' utility records are consolidated into DAGS' report since DAGS manages their buildings. These include the departments of Budget and Finance (B&F), Human Resource Development (DHRD), Taxation (DOTAX), and most offices within the Department of Business, Economic Development, and Tourism (DBEDT).

**Table 1: Utility Electricity Consumption by State Agencies**

<b>Agency</b>	<b>FY05 kWh</b>	<b>FY06 kWh</b>	<b>FY07 kWh</b>	<b>FY08 kWh</b>	<b>FY09 kWh</b>	<b>FY10 kWh</b>	<b>FY11 kWh</b>
AG	35,420	34,798	34,945	35,849	33,890	33,224	32,900
DAGS	49,230,992	49,779,316	51,797,308	52,245,047	45,519,417	42,576,283	41,994,459
DBEDT	496,413	358,760	610,347	546,138	546,359	729,112	417,862
DCCA	1,535,941	1,541,342	1,611,503	1,615,431	1,642,705	1,447,930	1,456,311
DHHL	2,283,061	2,494,168	2,989,292	3,391,736	3,694,566	3,404,418	3,169,941
DHS	3,857,967	4,007,321	4,046,162	3,924,563	3,717,370	3,586,914	3,315,318
DLIR	330,872	400,854	394,799	373,783	299,619	284,408	267,338
DLNR	3,454,292	3,454,427	3,628,338	3,648,394	3,480,072	3,024,661	2,920,740
DOA	2,825,754	2,920,780	3,309,250	2,845,190	2,327,260	2,127,374	2,038,538
DOD	6,703,102	6,913,967	7,129,678	6,932,392	6,392,223	6,155,416	6,588,379
DOE	143,384,951	144,128,064	148,414,237	147,987,700	138,927,520	133,201,033	135,465,041
DOH	25,726,039	25,496,454	25,404,262	25,887,669	26,216,375	24,971,055	24,371,917
DOT - Air	128,101,116	129,604,326	131,269,766	133,988,212	129,019,506	128,111,323	127,666,443
DOT - Har	10,315,114	10,702,082	11,374,640	11,325,990	9,550,867	8,123,410	7,373,193
DOT - Hwy	28,804,170	28,203,362	28,303,598	27,941,945	26,426,481	25,754,283	27,418,339
FTZ	921,920	1,044,160	1,011,840	1,033,600	895,680	934,400	876,480
HCDA	1,150,027	252,285	322,151	318,810	312,752	677,124	664,687
HHFDC	3,057,300	3,142,688	5,430,162	5,832,603	5,485,910	5,205,445	4,864,788
HHSC	20,127,174	18,553,340	18,804,930	18,146,647	17,914,301	18,172,891	18,672,780
HPHA	18,456,206	18,567,637	19,235,874	18,884,841	18,481,546	18,553,412	18,061,647
HSPLS	8,477,520	8,512,526	8,890,675	8,714,828	8,181,762	7,654,267	7,648,544
HTA - CC	7,389,600	8,715,000	8,056,800	7,848,600	6,525,600	5,777,400	6,214,200
NELHA	4,270,831	3,917,223	4,035,528	4,178,093	4,500,456	4,500,909	4,832,161
PSD	21,966,423	21,584,032	20,839,695	20,431,439	18,910,860	17,861,470	17,172,764
UH	185,299,794	200,215,505	195,556,630	193,639,569	182,226,984	180,442,128	183,610,659
<b>Totals</b>	<b>678,201,997</b>	<b>694,544,416</b>	<b>702,502,409</b>	<b>701,719,068</b>	<b>661,230,080</b>	<b>643,310,297</b>	<b>647,115,427</b>

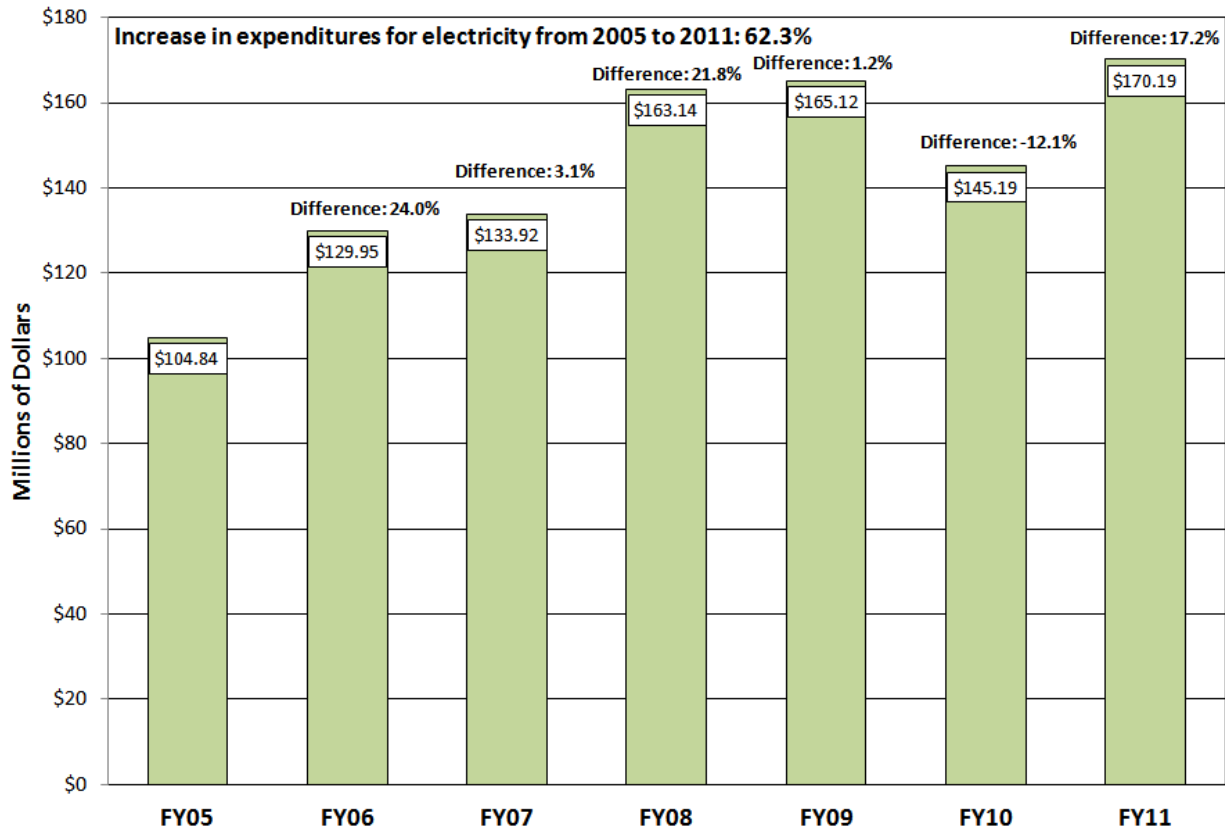
**Table 2: Differences in Electricity Consumption (kWh) for Reported Years**

Agency	FY05- FY06	%	FY06- FY07	%	FY07- FY08	%	FY08- FY09	%	FY09- FY10	%	FY10- FY11	%	FY05- FY11	%
AG	-622	-1.8	147	0.4	904	2.6	-1,959	-5.5	-666	-2.0	-324	-1.0	-2,520	-7.1
DAGS	548,325	1.1	2,017,992	4.1	447,739	0.9	-6,725,630	-12.9	-3,132,934	-6.9	-581,824	-1.4	-7,236,533	-14.7
DBEDT	-137,653	-27.7	251,587	70.1	-64,209	-10.5	221	0.0	182,753	33.4	-311,250	-42.7	-78,551	-15.8
DCCA	5,402	0.4	70,160	4.6	3,928	0.2	27,275	1.7	-144,215	-9.1	8,381	0.6	-79,630	-5.2
DHHL	211,107	9.2	495,124	19.9	402,444	13.5	302,830	8.9	-290,228	-7.9	-234,477	-6.9	886,880	38.8
DHS	149,354	3.9	38,841	1.0	-121,599	-3.0	-207,193	-5.3	-130,456	-3.5	-271,596	-7.6	-542,649	-14.1
DLIR	69,982	21.2	-6,055	-1.5	-21,016	-5.3	-74,164	-19.8	-15,211	-5.1	-17,070	-6.0	-63,534	-19.2
DLNR	135	0.0	173,911	5.0	20,056	0.6	-168,322	-4.6	-455,411	-13.1	-103,921	-3.4	-533,552	-15.4
DOA	95,026	3.4	388,470	13.3	-464,060	-14.0	-517,930	-18.2	-200,466	-8.6	-88,836	-4.2	-787,216	-27.9
DOD	210,865	3.1	215,711	3.1	-197,286	-2.8	-540,170	-7.8	-236,807	-3.7	432,963	7.0	-114,723	-1.7
DOE	743,113	0.5	4,286,173	3.0	-426,537	-0.3	-9,060,180	-6.1	-5,720,327	-4.1	2,246,928	1.7	-7,919,910	-5.5
DOH	-229,585	-0.9	-92,192	-0.4	483,407	1.9	328,706	1.3	-1,252,481	-4.8	-599,137	-2.4	-1,354,122	-5.3
DOT-Air	1,503,210	1.2	1,665,440	1.3	2,718,446	2.1	-4,968,706	-3.7	-905,908	-0.7	-447,155	-0.3	-434,673	-0.3
DOT-Har	386,968	3.8	672,558	6.3	-48,650	-0.4	-1,775,123	-15.7	-1,422,117	-14.9	-756,757	-9.3	-2,941,921	-28.5
DOT-Hwy	-600,808	-2.1	100,236	0.4	-361,653	-1.3	-1,515,465	-5.4	-684,021	-2.6	1,662,671	6.5	-1,385,831	-4.8
FTZ	122,240	13.3	-32,320	-3.1	21,760	2.2	-137,920	-13.3	38,720	4.3	-57,920	-6.2	-45,440	-4.9
HCDA	-897,742	-78.1	69,866	27.7	-3,341	-1.0	-6,058	-1.9	364,372	116.5	-12,437	-1.8	-485,340	-42.2
HHFDC	85,389	2.8	2,287,474	72.8	402,441	7.4	-346,693	-5.9	-280,465	-5.1	-340,657	-6.5	1,823,808	60.0
HHSC	-1,573,834	-7.8	251,590	1.4	-658,283	-3.5	-232,346	-1.3	258,590	1.4	499,889	2.8	-1,454,394	-7.2
HPHA	111,430	0.6	668,237	3.6	-351,033	-1.8	-403,295	-2.1	71,603	0.4	-491,764	-2.7	-394,559	-2.1
HSPLS	35,006	0.4	378,149	4.4	-175,847	-2.0	-533,066	-6.1	-527,486	-6.4	-5,732	-0.1	-828,976	-9.8
HTA-CC	1,325,400	17.9	-658,200	-7.6	-208,200	-2.6	-1,323,000	-16.9	-748,200	-11.5	436,800	7.6	-1,175,400	-15.9
NELHA	-353,608	-8.3	118,305	3.0	142,565	3.5	322,363	7.7	453	0.0	331,252	7.4	561,330	13.1
PSD	-382,391	-1.7	-744,337	-3.4	-408,256	-2.0	-1,520,579	-7.4	-1,212,715	-6.4	-688,882	-3.9	-4,793,660	-21.8
UH	14,915,711	8.0	-4,658,875	-2.3	-1,917,061	-1.0	-11,412,585	-5.9	-1,772,977	-1.0	3,156,651	1.7	-1,689,135	-0.9

**Electricity Costs by State Agencies**

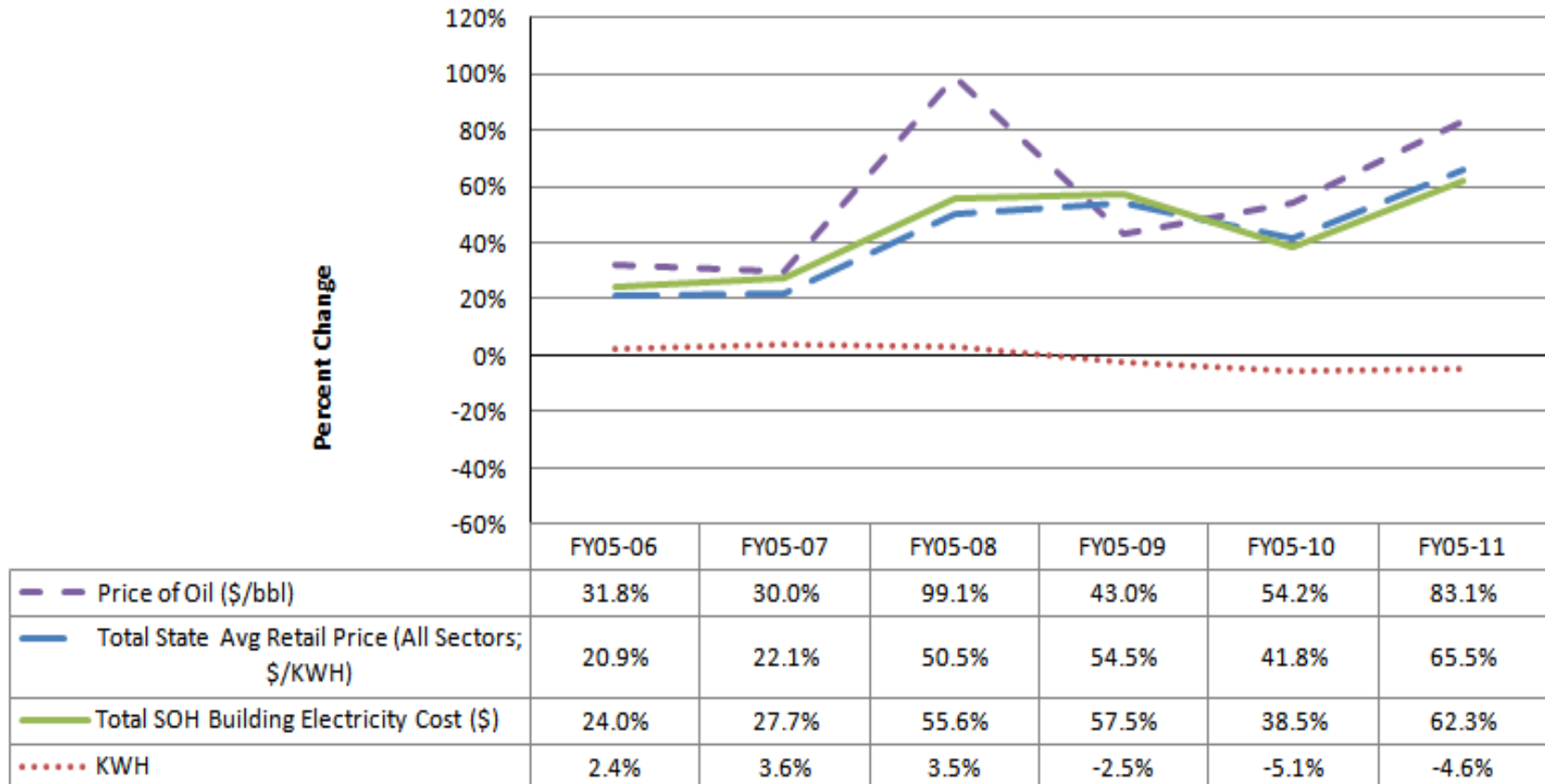
Even though state agency electricity consumption increased by only 0.6% between FY10 and FY11, in FY11 state agencies spent \$170 million on electricity, \$25 million, or 17.2%, more than in 2010. This is the most that the state paid for electricity in a single fiscal year since FY05 and serves as a reminder that Hawai‘i’s nearly 80% dependence on imported petroleum to produce electricity results in kWh prices heavily influenced by the volatility of world oil markets. Since LBE began, overall state agency electricity costs were driven higher each year by rising oil prices despite kWh consumption decreases, which started in 2007. Electricity cost state agencies \$104 million in baseline year 2005. Costs jumped by \$25 million in 2006, another \$4 million in 2007, \$30 million in 2008, and \$2 million in 2009. In FY10 overall state agency electricity costs declined by \$20 million as a result of efficiency and relatively lower oil prices. The cost totals for the fiscal years from 2005 to 2011 are given in Figure 3.

**Figure 3: Comparison of State Electricity Utility Costs FY05 to FY10**



Since the beginning of LBE, agencies' energy bills have reflected the fluctuations in the price of oil and electricity. 2011 was no exception. Average electricity costs in Hawai'i increased 16.7% from the previous year. Energy savings can reduce costs from increasing oil prices and amplify declining oil prices. Figure 4 shows the relationship between the price of oil, the price of electricity, overall cost to state agencies, and consumption as a percentage change from 2005 baseline figures.

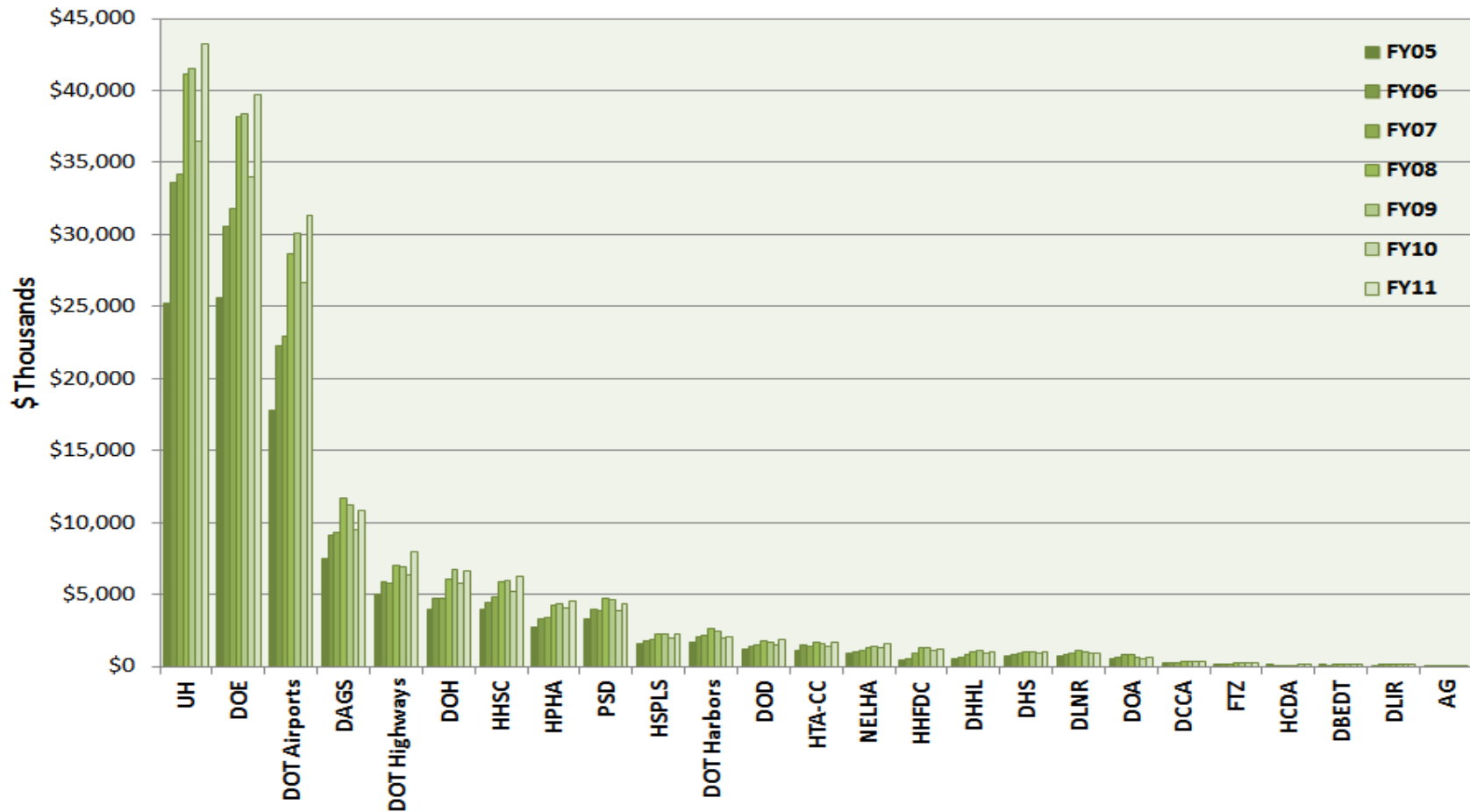
**Figure 4: Percent Change (over FY05) of Electricity Price, Cost, and Consumption**



Sources: NYMEX WTI Future Price; EIA-826 ; Utility (HECO, MECO, HELCO, & KIUC) Billing data

Agencies are actively addressing their energy consumption with methods such as performance contracting, retrofitting lights, tinting windows, replacing aging air conditioning systems, and assessing the potential for solar water heating. Some are also producing electricity with renewable energy systems that reduce the amount of electricity that is bought from the utility. Electricity costs for each agency are reported by fiscal year in Figure 5 below.

**Figure 5: Cost of Purchased Electricity by Agency from FY05 to FY11**



Agencies' electricity costs for fiscal years 2005 through 2011 are shown in Table 3. Table 4 lists the differences in dollars paid for utility electricity from year to year and the percentage change between years.

**Table 3: Cost of Electricity Purchased by State Agencies**

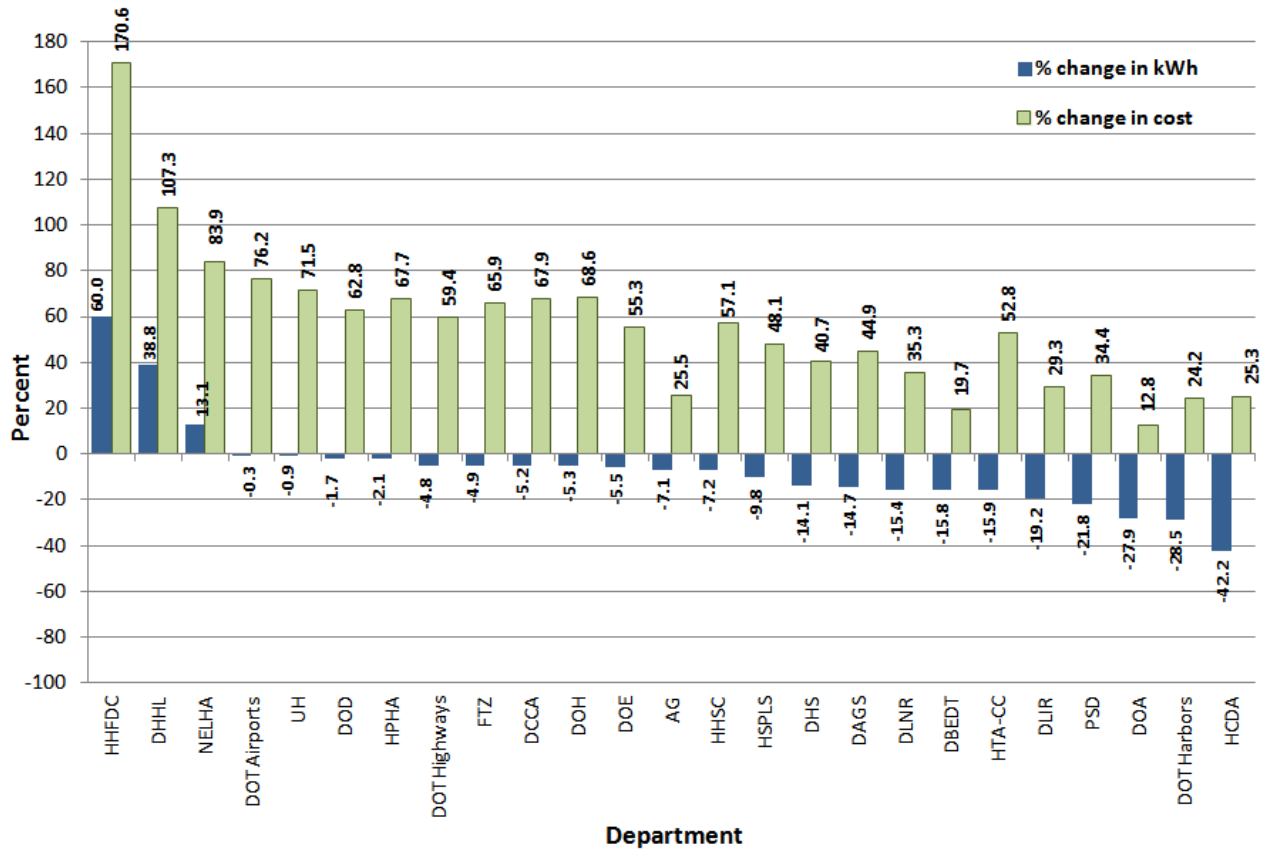
<b>Agency</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
AG	\$10,741	\$11,632	\$12,204	\$14,626	\$12,843	\$11,996	\$13,483
DAGS	\$7,482,710	\$9,092,737	\$9,310,630	\$11,667,310	\$11,194,778	\$9,499,992	\$10,845,266
DBEDT	\$115,698	\$89,907	\$124,219	\$139,262	\$158,482	\$186,947	\$138,484
DCCA	\$219,025	\$268,360	\$273,982	\$347,577	\$372,611	\$309,522	\$367,715
DHHL	\$489,457	\$628,026	\$811,507	\$1,031,764	\$1,128,085	\$946,675	\$1,014,414
DHS	\$682,243	\$847,648	\$869,025	\$1,011,941	\$1,004,178	\$896,555	\$960,112
DLIR	\$80,885	\$116,710	\$116,422	\$130,371	\$115,599	\$99,715	\$104,559
DLNR	\$705,898	\$841,123	\$889,243	\$1,057,708	\$1,044,212	\$860,711	\$955,276
DOA	\$545,360	\$647,465	\$789,592	\$793,773	\$649,987	\$559,057	\$615,400
DOD	\$1,163,226	\$1,422,139	\$1,492,829	\$1,741,314	\$1,703,990	\$1,487,429	\$1,893,211
DOE	\$25,567,384	\$30,610,076	\$31,805,744	\$38,173,389	\$38,403,638	\$33,966,349	\$39,696,016
DOH	\$3,934,069	\$4,728,875	\$4,759,470	\$6,022,990	\$6,681,536	\$5,771,076	\$6,633,200
DOT-Air	\$17,761,072	\$22,259,323	\$22,920,171	\$28,641,831	\$30,078,400	\$26,676,871	\$31,291,001
DOT-Har	\$1,648,777	\$2,044,297	\$2,136,409	\$2,663,999	\$2,422,304	\$1,939,602	\$2,047,988
DOT-Hwy	\$5,010,087	\$5,905,006	\$5,782,714	\$6,980,180	\$6,881,176	\$6,318,805	\$7,987,219
FTZ	\$134,290	\$180,726	\$174,446	\$221,373	\$206,781	\$200,512	\$222,800
HCDCA	\$149,278	\$53,436	\$61,014	\$74,315	\$78,566	\$166,956	\$186,974
HHFDC	\$451,607	\$568,198	\$910,554	\$1,243,518	\$1,256,511	\$1,101,118	\$1,215,786
HHSC	\$3,982,094	\$4,415,497	\$4,801,818	\$5,866,179	\$6,007,542	\$5,181,870	\$6,254,696
HPHA	\$2,726,530	\$3,308,536	\$3,427,260	\$4,229,350	\$4,314,868	\$4,023,549	\$4,572,759
HSPLS	\$1,533,815	\$1,808,919	\$1,893,315	\$2,244,370	\$2,249,731	\$1,946,842	\$2,272,193
HTA-CC	\$1,104,124	\$1,520,889	\$1,411,445	\$1,717,207	\$1,582,841	\$1,356,185	\$1,686,670
NELHA	\$871,574	\$1,015,139	\$1,071,918	\$1,313,291	\$1,425,614	\$1,301,215	\$1,603,147
PSD	\$3,264,187	\$3,951,300	\$3,848,077	\$4,689,674	\$4,601,729	\$3,897,747	\$4,385,946
UH	\$25,206,974	\$33,613,946	\$34,221,881	\$41,121,936	\$41,486,486	\$36,468,378	\$43,222,011
<b>Total</b>	<b>\$104,841,105</b>	<b>\$129,949,909</b>	<b>\$133,915,889</b>	<b>\$163,139,248</b>	<b>\$165,062,485</b>	<b>\$145,175,672</b>	<b>\$170,186,326</b>

**Table 4: Differences in Cost of Electricity for Reported Years (\$)**

Agency	FY05- FY06	%	FY06- FY07	%	FY07- FY08	%	FY08- FY09	%	FY09- FY10	%	FY10- FY11	%	FY05- FY11	%
AG	892	8.3	571	4.9	2,422	19.8	-1,783	-12.2	-847	-6.6	1,488	12.4	2,743	25.5
DAGS	1,610,028	21.5	217,892	2.4	2,356,681	25.3	-472,533	-4.1	-1,726,902	-15.4	1,345,274	14.2	3,362,556	44.9
DBEDT	-25,792	-22.3	34,312	38.2	15,043	12.1	19,220	13.8	28,464	18.0	-48,462	-25.9	22,786	19.7
DCCA	49,335	22.5	5,622	2.1	73,595	26.9	25,034	7.2	-52,553	-14.5	58,194	18.8	148,690	67.9
DHHL	138,569	28.3	183,480	29.2	220,257	27.1	96,320	9.3	-181,446	-16.1	67,739	7.2	524,957	107.3
DHS	165,405	24.2	21,378	2.5	142,915	16.4	-7,762	-0.8	-107,623	-10.7	63,557	7.1	277,869	40.7
DLIR	35,825	44.3	-288	-0.2	13,948	12.0	-14,771	-11.3	-15,884	-13.7	4,844	4.9	23,674	29.3
DLNR	135,225	19.2	48,120	5.7	168,465	18.9	-13,497	-1.3	-183,501	-17.6	94,565	11.0	249,378	35.3
DOA	102,105	18.7	142,127	22.0	4,181	0.5	-143,787	-18.1	-91,165	-14.0	56,342	10.1	70,039	12.8
DOD	258,913	22.3	70,690	5.0	248,485	16.6	-37,324	-2.1	-216,561	-12.7	405,782	27.3	729,985	62.8
DOE	5,042,692	19.7	1,195,668	3.9	6,367,645	20.0	230,248	0.6	-4,436,501	-11.6	5,725,366	16.9	14,128,631	55.3
DOH	794,806	20.2	30,595	0.6	1,263,520	26.5	658,546	10.9	-911,871	-13.6	862,124	14.9	2,699,131	68.6
DOT-Air	4,498,251	25.3	660,848	3.0	5,721,661	25.0	1,436,569	5.0	-3,400,684	-11.3	4,613,285	17.3	13,529,929	76.2
DOT-Har	395,521	24.0	92,112	4.5	527,590	24.7	-241,695	-9.1	-481,294	-19.9	106,738	5.5	399,212	24.2
DOT-Hwy	894,919	17.9	-122,293	-2.1	1,197,467	20.7	-99,004	-1.4	-564,905	-8.2	1,668,039	26.4	2,977,131	59.4
FTZ	46,437	34.6	-6,281	-3.5	46,927	26.9	-14,592	-6.6	-6,268	-3.0	22,288	11.1	88,510	65.9
HCDA	-95,842	-64.2	7,579	14.2	13,301	21.8	4,251	5.7	88,390	112.5	20,018	12.0	37,696	25.3
HHFDC	116,590	25.8	342,356	60.3	332,964	36.6	12,993	1.0	-155,392	-12.4	114,667	10.4	766,419	170.6
HHSC	433,404	10.9	386,321	8.7	1,064,360	22.2	141,363	2.4	-825,672	-13.7	1,072,826	20.7	2,272,602	57.1
HPHA	582,006	21.3	118,724	3.6	802,090	23.4	85,518	2.0	-291,407	-6.8	549,210	13.6	1,846,228	67.7
HSPLS	275,104	17.9	84,396	4.7	351,055	18.5	5,361	0.2	-302,889	-13.5	325,352	16.7	738,378	48.1
HTA-CC	416,764	37.7	-109,443	-7.2	305,761	21.7	-134,366	-7.8	-226,656	-14.3	330,485	24.4	582,546	52.8
NELHA	143,565	16.5	56,779	5.6	241,373	22.5	112,323	8.6	-124,399	-8.7	301,932	23.2	731,573	83.9
PSD	687,113	21.1	-103,222	-2.6	841,597	21.9	-87,945	-1.9	-736,537	-15.9	488,035	12.5	1,121,759	34.4
UH	8,406,972	33.4	607,935	1.8	6,900,055	20.2	364,550	0.9	-5,014,265	-12.1	6,749,789	18.5	18,015,036	71.5

As stated above, since the beginning of LBE, oil prices have driven overall electricity costs higher despite agencies using less electricity. This dynamic is illustrated in Figure 6 below.

**Figure 6: Consumption and Cost Percentage Change from FY05 to FY11 by Agency**



Since 2005, while 22 departments managed to decrease total electricity use, no agency was able to decrease costs. For example, the Foreign Trade Zone (FTZ), the Department of Transportation – Highways Division (DOT-Highways), the Department of Commerce and Consumer Affairs (DCCA), the Hawai'i Health Systems Corporation (HHSC), and the Department of Land and Natural Resources (DLNR) decreased their kWh consumption by 4.9%, 4.8%, 5.2%, 7.2%, and 15.4%, respectively, between 2005 and 2011, but their electricity bills all rose by more than 35% during the same period.



## **Efficiency in Buildings**

In Hawai‘i applying energy efficiency to the design, construction and operation of buildings is becoming a standard practice. The State of Hawai‘i is active in several “green building” initiatives and now requires LEED Silver certification, to the extent possible, for new construction and major renovation. In addition to energy savings, LEED Silver standards dictate improved indoor environmental quality, which has been linked to reduced absenteeism, up to 16% increased productivity, 20% better test performance in schools, and an average of 2½ days earlier discharge from hospitals.<sup>1</sup>

Leadership in Energy and Environmental Design (LEED) is a program of the nonprofit U.S. Green Building Council (USGBC). DBEDT joined the Council in 2006; its membership on behalf of the State of Hawai‘i allows all state employees access to USGBC publications and training sessions at a reduced cost, as well as exclusive online reports, participation in local USGBC chapter events, and reduced LEED project registration and certification fees. Although certification assures independent, third-party verification of a building’s performance to LEED standards, some agencies are designing facilities to meet LEED criteria but do not plan to formally verify and certify them because of cost considerations. In 2005 there was only one LEED Accredited Professional (LEED AP) among the state agencies. Now, there are 30 LEED APs on staff at five agencies: DBEDT, DOE, DOT, DAGS and UH. Other employees are in training to take the various LEED exams.

The following state buildings have either achieved LEED standards or are in process toward that goal. A number of these projects were already underway before the LBE initiative began.

### ***LEED Platinum***

- NELHA Hawai‘i Gateway Energy Center (completed)
- NELHA Gateway Center office structure (planned)

### ***LEED Gold***

- UH-Hilo Student Life Complex (completed)
- UH Institute of Marine Biology Coconut Island Biology Research Laboratories (design)
- UH Center for Microbial Oceanography Research and Education (complete)
- HSPLS North Kohala Public Library (complete)

### ***LEED Silver***

- DAGS CSD Administrative Building (registered)
- DAGS Keaukaha Military Reservation Joint Military Center (under construction)
- DAGS Maui Public Safety Complex (design)
- DOE ‘Ewa Makai Middle School campus (complete)
- DOE Kīhei High School campus (RFP)

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<sup>1</sup> Source: Garzone, C. (2006). U.S. Green Building Council and the LEED™ Green Building Rating System

- DOE Wailuku Elementary School II (design)
- DOE Baldwin High School Library (under construction)
- DOH Hawai‘i State Hospital new forensic facility (design)
- DOT-Air HNL Bus Maintenance Facility (planned)
- DOT-Air HNL Cargo Facility (planned)
- DOT-Air HNL Commuter Terminal (under design)
- DOT-Air HNL Concourse (under design)
- DOT-Air HNL Consolidated Car Rental Facility (designed)
- DOT-Air HNL Maintenance Facility (planned)
- DOT-Air HNL Mauka Concourse (under design)
- DOT-Air KOA Aircraft Rescue Fire Fighters Building (designed)
- DOT-Air KOA Commuter Terminal (designed)
- HSPLS ‘Aiea Public Library (funded)
- HSPLS Koloa Public Library (sited)
- HSPLS Nānākuli Public Library (planning)
- HSPLS Mānoa Public Library (under construction)
- PSD Kaua‘i Regional Complex (planned)
- PSD Maui Community Correctional Center relocation (stopped)
- PSD O‘ahu Regional Complex (planned)
- PSD New transitional housing (planned)
- UH Information Technology Center (design)
- UH-Hilo Hawai‘ian Language Building (under construction)
- UH-Hilo Sciences and Technology Center (under construction)
- UH-Hilo Student Services Building addition and renovation (under construction)
- UH-Hilo College of Pharmacy (planning and design)
- UH-Hilo Student Services Building addition and renovation (design)
- UH-Mānoa Campus Center renovation and addition (under construction)
- UH-Mānoa College of Education (planned, pending funds)
- UH-Mānoa Edmonson Hall renovation (funded for design)
- UH-Mānoa Frear Hall Residence Building (completed)
- UH-Mānoa Gartley Hall renovation (design)
- UH-Mānoa Kennedy Performance Arts Facilities (funded for design)
- UH-Mānoa Kuykendall Hall renovation (funded for design)
- UH-Mānoa Pacific Regional Biosafety Laboratory (funded for design and construction)
- UH- Mānoa Performing Arts Facility (design)
- UH-Mānoa School of Law addition and renovation (funded for planning)
- UH-Mānoa new classroom building (planning)
- UH-West O‘ahu new Kapolei campus development (under construction)
- Honolulu Community College Advanced Technology Training Center (funded for design)
- Kapi‘olani Community College Culinary Institute of the Pacific (design)
- Leeward Community College Education and Innovation Instructional Facility (funded for design)

- Maui Community College science facility (under construction)
- Windward Community College Library and Learning Center (under construction)

#### ***LEED Certified***

- DOE Waipahu Intermediate School Cafeteria (completed)
- UH-Mānoa School of Medicine (completed)
- UH-Hilo ‘Imiloa Astronomy Center of Hawai‘i (completed)
- UH John A. Burns School of Medicine (completed)

#### ***LEED Commercial Interiors***

- DOT-Air HNL Airport Lounge (completed)

#### ***LEED Existing Buildings: Operations and Maintenance***

- DAGS Leio papa A. Kamehameha State Office Tower (ongoing performance period)

DOE also has eight school facilities planned, designed or under construction that meet LEED Silver standards but will not pursue formal verification and certification due to cost concerns. *Hawai‘i High Performance School Guidelines*, developed by DBEDT in cooperation with DOE, which provide guidance for design consultants, will still be used when applicable to achieve LEED requirements in school buildings. Sustainable design criteria similar to those of LEED are being incorporated by DAGS during the design phase of the Kapolei Judiciary Complex, within the constraints of project funding. DBEDT, working with DAGS, has developed guidelines for design and construction which can be applied toward meeting LEED requirements.

Act 155, signed into law in 2009, requires all existing state buildings that are either larger than 5,000 square feet or use more than 8,000 kWh of electricity per year to be benchmarked by December 31, 2010. Benchmarking is a process which involves calculating the building’s annual energy consumption per square foot. Buildings are given an “energy usage intensity” (EUI) score, allowing buildings to be quickly compared and identify areas for improving energy efficiency. DBEDT has offered several training sessions on U.S. Environmental Protection Agency’s (EPA) Portfolio Manager to state employees and assisted a number of agencies in completing the benchmarking. Portfolio Manager is an online tool available for benchmarking a building’s energy use.

Benchmarking is also a way of evaluating whether buildings are potential candidates for ENERGY STAR® status. ENERGY STAR® is a joint program of the U.S. EPA and the U.S. Department of Energy (USDOE) to protect the environment and reduce costs through energy-efficient products and practices. ENERGY STAR® certified buildings rank in the top quartile of an EPA performance rating system calculated from actual energy use of similar existing buildings in the nation. ENERGY STAR® certified buildings also must qualify for thermal comfort while meeting lighting, ventilation, and indoor air quality requirements.

Hawai‘i has been an active member of EPA’s ENERGY STAR® 10% Challenge program since 2005. The program identifies buildings where financially attractive energy efficiency improvements could reduce energy use by 10%, and then implements those changes through low-cost building tune-ups, lighting upgrades, and replacement of old equipment. Another benefit is the reduction of greenhouse gas emissions.

Benchmarking efforts in FY11 enabled the identification and certification of eight (8) ENERGY STAR® buildings. To date, 172 state buildings have been benchmarked and the eighteen (18) state facilities listed below have achieved ENERGY STAR® status; some of which have received annual certification more than once.

- Kakuhihewa Building (Kapolei State Building)
- Leiopapa A Kamehameha Building (State Office Tower)
- Abner Paki Hale Courthouse
- Hilo State Office Building
- Keoni Ana Building
- Waipahu Civic Center
- Kāne‘ohe Elementary School
- Kāne‘ohe Civic Center
- Wahiawā Civic Center
- OR&L Main
- AAFES Building
- King Kalākaua Building
- Ho‘opono
- State Capitol Building
- Ala Moana Health Center
- Diamond Head Health Center
- Ke‘elikolani Building
- Leeward Health Center

To ensure that buildings function as efficiently as possible, commissioning and retro-commissioning processes are being employed. Commissioning is applied to new buildings, while retro-commissioning optimizes an existing building’s operation and maintenance. DAGS, for example, is retro-commissioning eleven (11) projects on four islands.

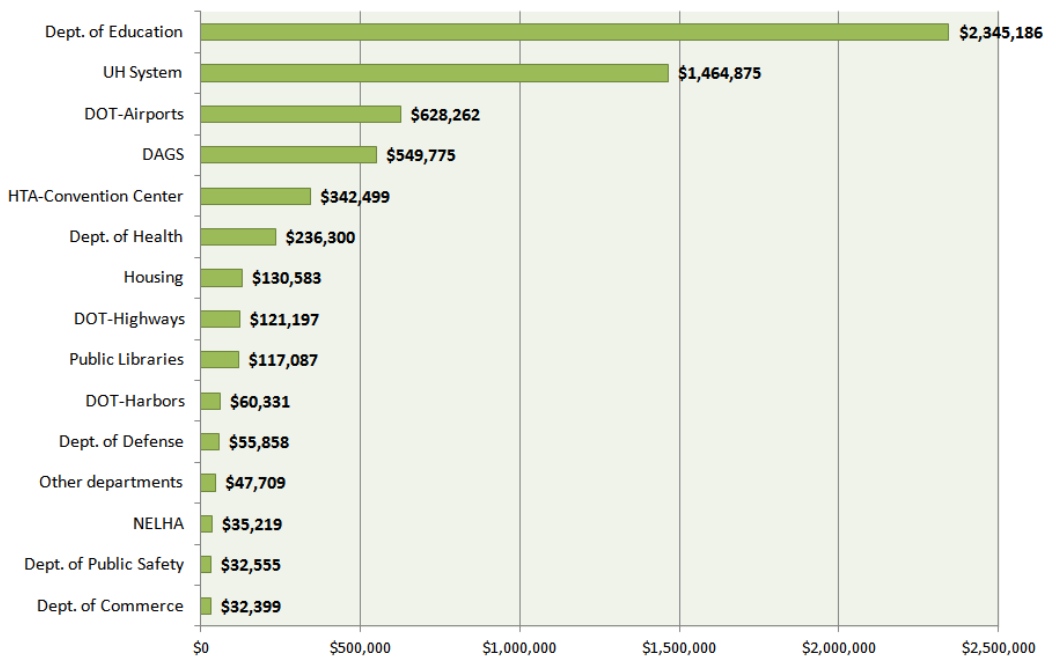
DAGS is also the state’s lead agency for energy performance contracting, a proven method of implementing energy efficiency capital projects without requiring up-front funds. DAGS developed a prequalified list of Energy Service Companies and set of boilerplate documents which may be used by State and County agencies to solicit performance contracting proposals. In FY11 DAGS, in conjunction with DBEDT, worked with other agencies to initiate performance contracts for DAGS Phase II and buildings owned/managed by DOT, PSD and UHCC.

## Rebates Save Money at State Facilities

Since 1996 many public agencies have taken advantage of rebate programs. In the past, the utilities had provided rebates for both retrofit and new construction in the areas of lighting, motors, and heating/ventilation/air conditioning (HVAC) and also supported customized approaches. In FY10, following state law, the Public Utilities Commission (PUC) selected a third-party public benefits fund administrator, Hawai'i Energy, to take over the rebate programs.

More than \$6.05 million in rebates have been provided by the Hawai'ian Electric Company, Inc. (HECO), its subsidiaries, and Hawai'i Energy to State of Hawai'i executive agencies from 1996 through 2011. In FY11 state agencies received \$733,349 in rebates, the highest rebate total of any year. Savings in 2011 from retrofits and new construction was 68,849 MWh, enough to power 9,320 homes in Hawai'i for that year. The utility costs and energy savings are expected to grow to over \$283.1 million and 1,093,384 MWh, respectively, over the life of the energy-efficient equipment.<sup>2</sup> Over the life of the equipment, the savings are equivalent to approximately 148,000 households' annual electricity use.<sup>3</sup>

**Figure 7: Rebates since 1996, by Agency**



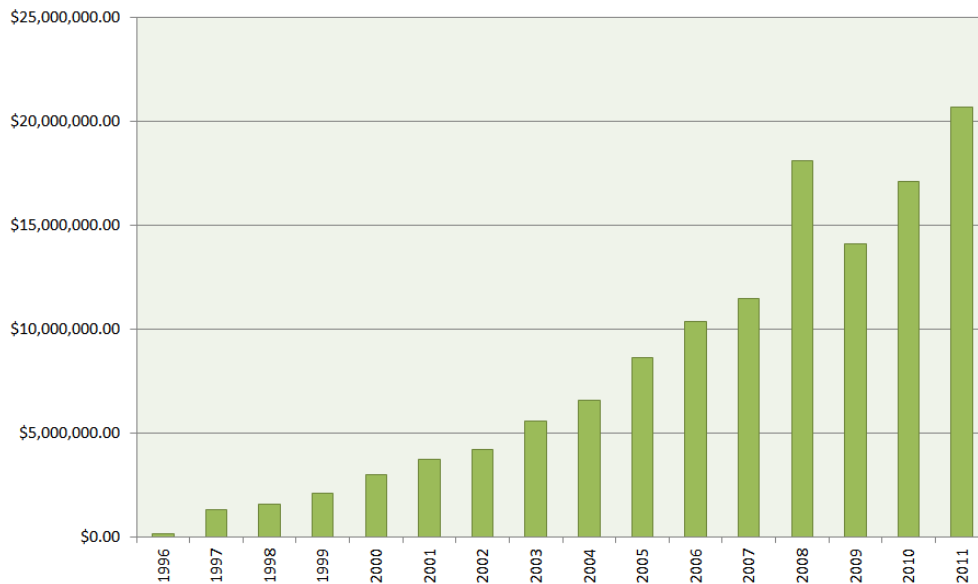
<sup>2</sup> For this report, it was assumed that the average life of appliances, custom, motor and cooling equipment is 15 years, while lighting is 14 years and water heating 10 years. (Source: 2004 HECO IRP, Appendix 11)

<sup>3</sup> Figures representing number of households' annual electricity consumption were calculated using data from Hawai'i Energy, which shows that average household consumption per month in Hawai'i for 2010 is 615 kWh. The average annual consumption for Hawai'i households is approximately 7380 kWh. (Source: HECO)

The DOE and the UH system have been the largest beneficiaries of rebates, receiving over \$2.3 million and \$1.4 million respectively since 1996, as shown above in Figure 7. The “Housing” rebates were provided to the Housing and Community Development Corporation of Hawai‘i (HCDCH), which was reorganized in 2005 into two agencies, Hawai‘i Public Housing Authority (HPHA) and Hawai‘i Housing Finance and Development Corporation (HHFDC).

The state agencies receiving rebates from the HECO utilities saved an additional \$169,354 to \$2.6 million per year on their electricity bills from 1996 to June 30, 2010. In total, the agencies have saved \$128.8 million during the same period.<sup>4</sup> Annual cost savings for state executive agencies are depicted in Figure 8.

**Figure 8: State Agency Rebate Savings (\$) from HECO since 1996**

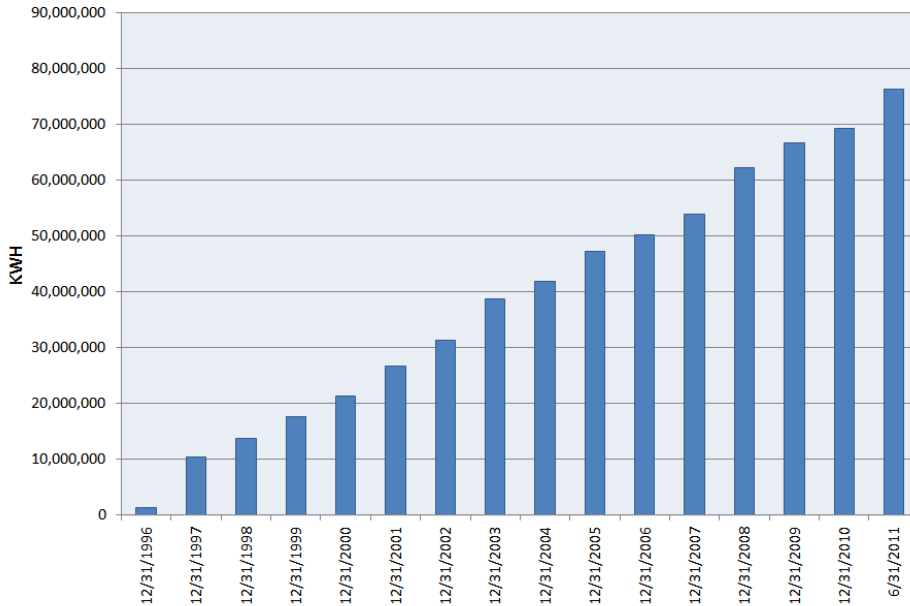


Since 1996, an estimated total of 620 million kWh have been saved through rebates at state facilities. This is enough to power approximately 83,975 households for a year.<sup>5</sup> Annual electricity savings (kWh) due to state agency participation in utility efficiency rebate programs since 1996 are depicted in Figure 9.

<sup>4</sup> This figure was calculated by adding up the estimated annual cost savings from 1996. Estimated annual cost savings were calculated by multiplying the kWh savings by the average cost of electricity per kWh (Source: Energy Information Administration) during each year going back to 1996. It should be noted that the annual savings are cumulative, since equipment installed in one year continues to offer savings over time.

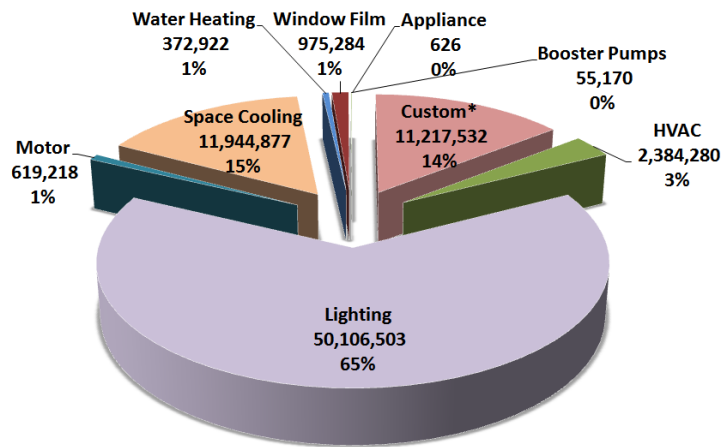
<sup>5</sup> Figures representing number of households’ annual electricity consumption were calculated using data from Hawai‘i Energy, which shows that average household consumption per month in Hawai‘i for 2010 is 615 kWh. The average annual consumption for Hawai‘i households is approximately 7380 kWh. (Source: HECO)

**Figure 9: Annual State Executive Facilities' Energy Savings (kWh) from HECO Rebate Programs since 1996**



In 2011 lighting retrofits accounted for approximately 49 million kWh of electricity savings, representing 64% of the total. Space cooling saved an additional 14.1 million kWh and custom retrofits saved 11.2 million kWh. Other rebates were provided for motors, water heating, and appliances. State agencies' 2010 energy savings due to utility rebate programs broken down by technology are depicted in Figure 10.

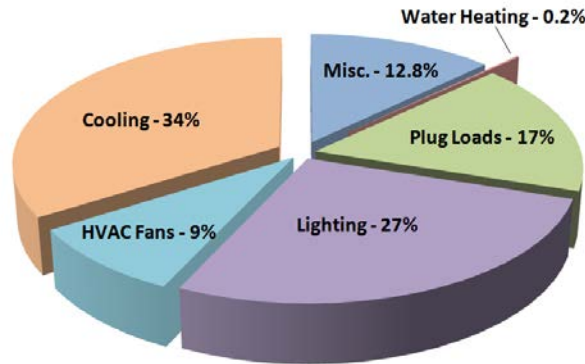
**Figure 10: Rebate Energy Savings (kWh) by Technology in 2010<sup>6</sup>**



<sup>6</sup> \*Custom rebates are any rebates that fall outside of prescriptive rebates and can include equipment and retrofits from the other rebate groups as well as items such as building envelope improvements, sensors/controls, variable frequency/volume equipment, and CO control parking ventilation equipment.

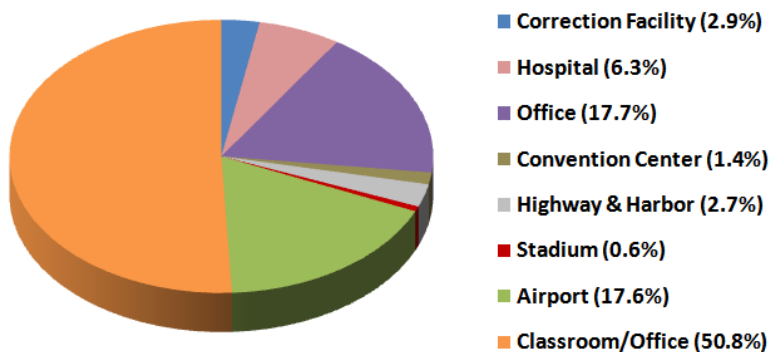
HECO's data show that a typical office building's electricity is primarily used for space conditioning. The combined burden of running systems for cooling, heating, ventilation and air-conditioning (HVAC) requires 43% of a typical office building's electricity. Lighting is responsible for about 27%. "Plug loads" such as computers, copiers, and other equipment consume an additional 17% while water heating accounts for 0.2%. Miscellaneous uses (e.g. elevators, water coolers) comprise the remaining 12.8%. These data, shown in Figure 11, highlight areas for energy conservation.

**Figure 11: Typical Office Building Energy Use Breakdown<sup>7</sup>**



When State of Hawai'i facilities on O'ahu are examined by type, campuses consisting of classrooms and offices consume about half of the electricity. Office buildings and the Honolulu International Airport each consume approximately 17% of the total. The public hospital system is also a significant consumer, accounting for around 6%. These data, provided by HECO, are shown in Figure 12.

**Figure 12: State of Hawai'i Facilities on O'ahu, Electricity Consumption by Occupancy Type<sup>8</sup>**



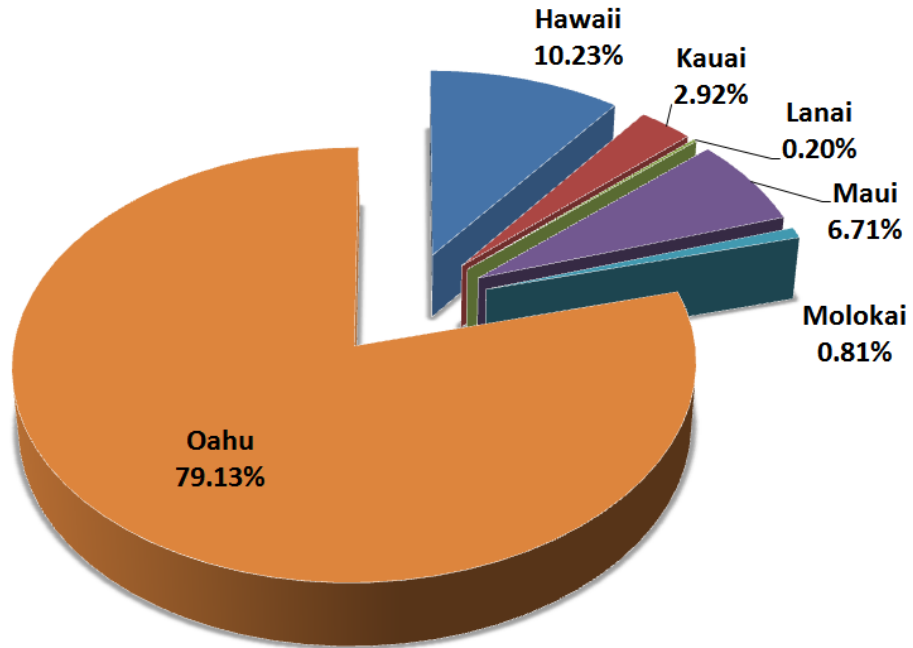
<sup>7</sup> Source: Van Liew, T. (2003). HECO and Rebuild Hawai'i: Energy Benchmarking Studies in Hawai'i

<sup>8</sup> Source: Cedric D.O. Chong and Associates. (2005). State of Hawai'i Facilities on O'ahu Energy Benchmarking Study



Roughly 80% of the more than 2,600 buildings owned and operated by the state government are on O‘ahu.<sup>9</sup> Figure 13 shows consumption by island. These data were supplied by HECO.

**Figure 13: Percentage of Total State Agency Consumption by Island in 2011**



<sup>9</sup> Source: Cedric D.O. Chong and Associates. (2005). State of Hawai‘i Facilities on O‘ahu Energy Benchmarking Study

## **Highlights of Current State Energy Activities**

Since the State of Hawai‘i established its energy program in 1974, state agencies have undertaken a myriad of activities focusing on energy efficiency, conservation, and renewable energy. The Department of Business, Economic Development, and Tourism’s (DBEDT) director, the state’s Energy Resources Coordinator, is responsible for coordinating energy activities statewide.

These decades of programmatic action have positioned the Administration to rapidly implement the Lead By Example (LBE) initiative. The state’s energy staff and many agencies’ efforts have already built a solid foundation, completed some benchmarking and assessments, provided numerous opportunities for training, and executed a number of projects. Some of the recent achievements are described below.

### ***Efficiency***

Eighteen (18) state buildings have received ENERGY STAR® awards, acknowledging that they rank in the top 25% of similar buildings nationwide. Agencies are reviewing buildings to recertify existing buildings and to identify new buildings for certification.

Ten (10) state buildings are LEED certified. An additional 55 LEED projects are in the process toward the goal of certification.

Thirteen (13) state buildings have been retro-commissioned to the investigation phase since 2008, an additional fifty-one (51) are in the process, and five (5) have been retro-commissioned or will be as part of LEED projects.

A total of 53 workshops and other events relating to LBE topics were held in FY11, attracting at least 5,344 participants, including many from state agencies. In some cases, DBEDT provided funds so that other executive agencies’ staff members could attend the training.

The State Building Code Council approved the 2006 International Energy Conservation Code (IECC) and modified the code to better suit the climate in Hawai‘i, resulting in an estimated 15% efficiency improvement.

DBEDT assisted with adoption of county building energy codes. IECC 2006 was adopted by Maui County in October 2009, Hawai‘i County in October 2010, and the City and County of Honolulu in November 2009. Kaua‘i County adopted IECC 2009 in May 2010.

The Energy Services Coalition, a national nonprofit organization dedicated to supporting performance contracting, recognized the State of Hawai‘i as first in the nation in Energy Savings Performance Contracts for State Building Efficiency.

The DAGS completed construction for a \$33.4 M Phase I energy savings performance contract (ESPC) for ten (10) buildings in the Capitol District. DAGS also executed a contract for a Phase II ESPC, which will cover 33 buildings.

DAGS initiated the iConserve program for State employees working in the ten (10) State office buildings covered under the Phase I performance contract. The iConserve program is to change State employee behavior patterns such as turning off lights, closing doors, etc. through education and training to help sustain energy savings.

DOT issued an RFP for an ESPC covering fifteen (15) airports, five (5) harbors, and highways facilities.

UH-CCs have all started construction for various performance contracts that will implement major energy conservation measures in their portfolio of buildings.

PSD recently entered a Guaranteed Energy Savings Agreement for the O'ahu Community Correctional Center and the Halawa Correctional Facility, which will retro commission a number of energy-savings measures at these facilities that will result in annual energy savings of nearly \$2 million over the next twenty (20) years.

HPHA has selected a performance contractor to furnish HSPC consultant services to reduce energy consumption at its properties.

DHHL has completed a number of large energy-efficient residential development projects. The 403-unit Kanehili Subdivision in East Kapolei is still under construction, with approximately 276 families moved in. Ka'ūpuni Village, DHHL's LEED Platinum subdivision, completed construction in March 2011, which consists of 19 affordable, net zero energy homes in Wai'anae, O'ahu. The 19 families moved in on May 2011. The Kumuhau Subdivision, which 33 of 45 native Hawai'ian families have moved in, is a LEED Silver project that will contain notable green features, which are standard in all homes.

DOE has begun to implement measures recommended in a retro-commissioning report completed for Ma'ili Elementary School in January 2011, such as upgrades to the school's campus-wide chilled water air conditioning system and other measures for improving equipment performance and efficiency with estimated annual savings of 238,500 kWh of electricity.

DOE, through a Memorandum of Agreement with the UH's Sustainable Saunders group will have a sustainability audit done at Kalani High School to determine user comfort, day lighting designs, ENERGY STAR® assessment, waste stream analysis and a water audit.

As a proof of concept of methods to reduce heat gain and increase comfort for portable classrooms, the DOE will complete an energy neutral portable in the fall of 2011

at 'Ewa Elementary School in partnership with UH School of Architecture. An energy neutral portable is an energy generating, self contained, heat reduced structure.

The DOE, in partnership with the UH College of Tropical Agriculture and Human Resources (CTAHR), was awarded an EPA Grant that will focus on best practices for school landscape management as a pilot study for 3 DOE schools on O'ahu. During the 18 month grant, irrigation water benchmarking will be included, along with a sample food waste audit.

DOE lowered school baseline levels in their School Energy Conservation Program, which started in 2007. Under the program, historical data is used to establish baseline consumption. Actual consumption is compared monthly and schools pay for ½ the excess consumption or receive credit for ½ the reduction in consumption. Effective FY2010, baselines were reduced by 16% for schools with central chiller A/C systems and 6% for schools without.

DBEDT, in coordination with the EPA and pursuant to Act 155, offered training and assistance for benchmarking to state agencies. Act 155, SLH 2009 requires benchmarking of all state facilities by December 31, 2010. Benchmarking is a process which involves calculating the building's annual energy consumption per square foot, allowing buildings to be compared and identifying areas for improving energy efficiency. To date, 172 state facilities have been benchmarked using the ENERGY STAR® Portfolio Manager online tool.

19 O'ahu Facilities were analyzed for benchmarking by DAGS and eight (8) facilities were certified and received an ENERGY STAR® Plaque.

UH Mānoa completed a full benchmarking of all required campus buildings using the ENERGY STAR® portfolio in FY2011.

UH Mānoa completed the initial phase of a complete campus-wide strategic energy plan which detailed a \$15 million campus-wide lighting retrofit and a \$36 million 5 MW Photo-voltaic alternate energy program to be implemented in FY2012.

UH Mānoa continues to operate the UH Mānoa "Green Days" program which shuts down participating building HVAC systems during weekends and holidays reducing the total annual usage by over 1%.

A campus wide sub-metering project is being completed at UH Hilo which will allow UH Administration to be able to read the 42 sub-meters online to monitor the usage and generate reports for energy saving analysis.

Hawai'i State Public Library System (HSPLS), in coordination with DAGS, completed window tinting projects for dozens of libraries statewide to reduce heat gain. Also, an investigation phase retro-commissioning projects is being performed for a number of libraries on various islands.

DOH will be converting all lamps at its five (5) O‘ahu Health Centers to SuperT8 lamps and changing ballasts to the electronic type.

DOD Hawai‘i Army National Guard implemented a daylighting project at the Wahiawa Armory and is piloting a foam insulation project at Fort Ruger.

HHSC has incorporated co-generation plants to offset electrical and heating cost for the Samuel Mahelona Memorial Hospital and West Kaua‘i Medical Center facilities.

DOT-Airports has replaced the Diamond Head Chiller Plant and the Oversea Chiller Plant project is under construction, which will contain new equipment that is energy-efficient. At Honolulu International Airport, there is an Energy Monitoring and Control System (EMCS) to turn off lights in areas that are not in use and reduce or eliminate air conditioning in these same areas.

HHFDC installed a new HVAC plant during renovations at Kamake‘e Vista that is equipped with a heat recovery system to heat hot water for the laundry facility that accommodates the two hundred twenty six (226) residential units.

DBEDT was awarded US EPA Pollution Prevention funding to establish a green workforce development program that will expand DBEDT’s existing Hawai‘i Green Business Program and Lead By Example Resource Efficiency Program, two programs designed to help businesses and government agencies green their operations through the reduction of energy, water, and resource consumption.

The Attorney General (AG) along with DoTAX and DLIR hosted a recycling event, Aloha ‘Āina Earth Day, to dispose of broken furniture and recycling materials at no cost to the State.

DOT-Hwy designs new xeriscape landscaping where possible and continues to install energy-efficient traffic signal lamps in new installations or when traffic signals are modified.

DOT-Air utilizes R-1 water where possible and non-potable water for landscape irrigation. Kona International Airport at Keāhole uses the effluent from their Wastewater Treatment Plant for irrigation, while Honolulu International Airport uses non-potable water from the Sumida Watercress Farm for irrigation.

UH Mānoa has an on-going campus-wide recycling and program that recycles cans, plastics, paper products, and green waste reducing the total waste-stream by 37%.

DOE schools are exploring the feasibility of compacting trash to reduce the overall refuse volume going to the landfills.

A project team made up of staff from DHRD, B&F, and DAGS-Information and Communications Services Division joined forces to streamline the process of tracking employee payments for various benefit programs administered by DHRD. Through the combined efforts of the project team, they were able to eliminate the need and cost to generate and transport the reams of report output required to track proper payment disbursements related to the benefits programs.

The FTZ recently began a cardboard recycling program where tenants and Zone users can place their cardboard boxes and shipping materials in a designated recycling area. This measure has effectively reduced the FTZ's solid waste refuse volume by forty (40) percent.

At all airports, the DOT recycles white paper and cardboard and monitors the amount recycled. Glass, newspaper, plastic and aluminum recycling is made difficult by security regulations at airport locations but recycling programs are in place at all our major airports.

UH Hilo campus actively reuses waste paper for internal non-official communications and has adopted a system-wide policy that all communication with student is by email. Further, UH Hilo has a new and active MIXED recycling process where all types of paper, plastic #1, 2, 5, clean metal cans, and glass are all recycled, which should more than double the amount of recycled waste to an estimated 132,000 cubic feet diverted from the landfills. The campus also has an active beverage redemption program where HI-5 containers are collected and a policy to buy recycled goods that meet the EPA's current guidelines, including reduction in packaging and buying in bulk quantities where practical. Further, UH Hilo just completed another round of e-waste recycling, sending back 9 pallets of computers at an estimated weight of 4,500 pounds.

### ***Renewables***

UH Hilo has a policy to include PV in all new construction projects and is currently working on completing a 23 KW PV system over the Campus Center, a 30 KW PV system with the new Sciences & Technology Building and on PB 11 roof. An 88 KW PV system over the North Hawai'i Education and Research Center has been completed. Also, an estimated 462 KW PV system will be in the Student Services Building project and an 8 KW PV system will be on the Hawai'ian Language College.

UH Maui College has installed a 12 KW PV system on its rooftop via student interns from its Sustainable Construction Program and has installed an 8 KW PV system on a rooftop of a new building along with a 1.2 KW wind turbine system.

UH Mānoa currently has installed or is actively installing 130 kW of PV in several systems on campus and is in the design phase to install an additional 5 MW of PV in FY2012.

A RFP for a photovoltaic project for schools on Kaua'i was posted in June 2011 by DOE and should be awarded to a vendor in the fall. The department is also engaging with utility companies on O'ahu, Hawai'i, and Maui to replicate what is being done on Kaua'i.

DAGS installed a 236 kilowatt (kW) PV system for the Kalanimoku Building located in the Capitol District.

DAGS is currently working on a number of photovoltaic system projects including a 100 kW PV system at the DAGS Central Services Division baseyard in Mapunapuna and at four state buildings in Honolulu (Keelikōlani Building, the Queen Liliuokalani Building, the Makai Parking Garage (Lot A) and Motor Pool (Lot P)). A project at the No. 1 Capitol Building will be installing an innovative use of PV cells into a glass art canopy as part of the Courtyard renovation.

HSPLS working with DAGS is constructing or has completed construction of six photovoltaic system projects at six public libraries: Waimea and Hanapepe on Kaua'i; Wai'anae and 'Āina Haina on O'ahu; Kahului on Maui; and Kailua-Kona on Hawai'i Island

DOA has three renewable energy projects in various stages of development. The Moloka'i and Waimea hydropower projects are in the design phase with the project for the installation of a photovoltaic system at a livestock slaughterhouse on O'ahu using 2011 Legislature appropriated funds for which the program will request allotment of the funds in FY 12.

DHHL will start construction soon on the largest Micro-scaled Concentrating Solar Power project in the State of Hawai'i. The Kalaeloa Solar One project will produce 5 megawatts of renewable energy for the island of O'ahu. The Kalaeloa Solar One's MicroCSP technology uses mirrored reflectors and optics to intensify solar energy, which in turn increases the system's energy efficiency. DHHL-LMD entered into a partnership with Keāhole Solar Power to lease land in Kalaeloa for this project.

DLNR Parks will look into developing solar and/or wind driven power sources that will be incorporated into power modules for park staff to recharge electrical utility vehicles and other energy needs. Funding has been appropriated for the design of these facilities. SP is considering the design and construction of a "green" State Park at the Mauna Kea State Recreation Area, which is in the planning stages, as all required permits and approvals are still needed as well as consultations.

DOT-Air has been working with DOT-Hwy, DOT-Har, FTZ, and UH to contract Power Purchase Agreement (PPA) of PV system over existing facilities. Currently, the awarded PPA locations in Design phase include Lāna'i Airport, Kona International Airport, Waimea Kohala Airport, and other facilities.

UH-CC are negotiating three (3) PPAs for PV systems on O‘ahu, Kaua‘i, and Maui.

NELHA is planning to release an RFP for the construction and operation of a 1 MW Ocean Thermal Energy Conversion (OTEC) plant.

DOT-Har entered into a power-purchase agreement involving a PV-based net-metering system at Nawiliwili Harbor, which provides for a reduction of fossil fuel use and price stability for the duration of the agreement.

### ***Transportation***

Windward CC recently purchased two flexible fuel sedans and one cargo van replacing older vehicles that were not as energy efficient.

UH Mānoa initiated a fleet replacement program employing EPA grants totaling \$340,000 to replace four of its heavy trucks in FY2011 with new clean diesel trucks which are bio-diesel compatible.

UH Mānoa initiated an electric vehicle replacement program for older Internal Combustion Engine (ICE) vehicles replacing three ICE vehicles with EV in FY2011

UH-CC is installing EV charging stations in parking lots.

Not all state agencies have vehicle fleets. Those that do must comply with federal and state regulations relating to the purchase of efficient vehicles, and to purchase the most fuel-efficient vehicles that meet the needs of their programs.

State vehicles are already utilizing E-10 Unleaded gasoline, which contains 10% ethanol. State law requires its sale. Many state vehicles are also flexible-fuel capable, and are capable of using higher percentages of ethanol if they become available. UH has a small fleet of alternatively-fueled and hybrid vehicles.

The state is developing a pricing preference for biodiesel, and several agencies are prepared to use it. Currently, supplies of locally-produced biodiesel are very limited.

Act 156, signed into law in 2009, requires all state and county agencies, when purchasing new vehicles, to seek vehicles with reduced dependence on petroleum-based fuels that meet the needs of the agency. The act provides a priority list with highest priority going to electric or plug-in hybrid electric vehicles, then hydrogen or fuel cell vehicles, other alternative fuel vehicles, hybrid electric vehicles, and vehicles identified by the EPA as “Fuel Economy Leaders.”



## ***Purchasing Practices***

Most departments already utilize life-cycle cost analyses, purchase efficient equipment (such as those with the ENERGY STAR® label), and take advantage of utility rebates. DAGS already requires the projects which it manages to use highly efficient mechanical equipment. Utility rebates have typically been used to help offset the cost of purchasing and installing energy-efficient equipment.

The State Procurement Office (SPO) continues to provide price and vendor listings, which include ENERGY STAR®, recycled, or environmentally preferred products. For products and supplies not included on the SPO price lists, purchasing agencies are still required to preferentially order recycled products, oil products with greater recycled content, and biofuels.

Information on recycled and environmentally preferable products (EPP) has been prepared by DBEDT and is available to state agencies. This includes lists of EPP available in Hawai‘i, a case study of successful EPP efforts, an evaluation of procurement practices, and recommendations for specifications and bid requests to address EPP concerns.

An annual survey designed to track the environmentally preferable purchasing practices of state agencies is coordinated by the DOH Office of Solid Waste Management. Please see Appendix 3 for a sample of the survey. The results show that state agency EPP in 2011 lead to greenhouse gas (GHG) savings equivalent to removing approximately 93 passenger vehicles from roadways for one year and energy savings equal to conserving about 17,188 gallons of gasoline in a year.

UH Mānoa has an extensive dining and food service recycling and bio-based program, with over 80% of all paper goods used by UH Mānoa Buildings Services coming from recycle paper products.

As stated in previous years, all of the property management staff in-house and vendors have been informed of the HHFDC practice that all appliances installed in residential apartments have the highest ENERGY STAR® rating possible. This stipulation has also been placed in to laundry vendor contracts; requiring all machines to be ENERGY STAR® rated since all power used is a direct operating expense.

## **Plans for Future LBE Activities**

### ***Continued Efficiency Efforts***

Continued improvements in efficiency and the use of renewable energy in state facilities are expected. Building on the solid foundation of assessments, training, benchmarking, energy performance contracts, and other activities undertaken in the past several decades, the administration will maintain its focus on modifying agency operations to improve efficiency. Gathering and assessing data, training staff, developing additional reference materials, enhancing inter-agency communications, identifying needs for additional skills and tools, and setting efficiency targets are all on the LBE agenda.

### ***Need for Adequate Implementation Resources***

State agencies are committed to the LBE effort, but future results depend on securing adequate implementation resources. Funds for capital improvements, maintenance, and retrofits must be appropriated for energy efficiency and renewable energy goals to be reached. High-priority projects include lighting, LEED commissioning, window tints and energy management controls, and, after energy efficiency measures are completed, the installation of renewable energy as appropriate.

### ***Agency Goals and Plans***

As part of the LBE initiative, state agencies have clarified and prioritized their plans for future energy improvements. These plans include new construction, as well as retrofits and repairs. LBE Working Groups will be addressing the following tasks:

#### 1) Data Collection:

- Develop a standardized data collection system to establish and refine baselines for various target areas: buildings, transportation, environmental practices and procurement.
- Develop standardized documents/formats for various data requirements.
- Train personnel to use the data tools; collect data for the various target areas.

#### 2) Training and Education Activities:

- Conduct training/education for the various Working Group members (e.g., speakers, selected discussion topics, inter-Working Group meetings to promote information/idea exchanges.)
- Develop an education/promotional campaign for state personnel to implement and practice increased efficiency.
- Continue technical training and education efforts to support LBE.

#### 3) Technical Assistance:

- Develop LEED projects and identify pilot projects.
- Develop commissioning and retro-commissioning projects.
- Conduct building assessments, including walk-through audits.
- Identify and certify ENERGY STAR® state buildings.

4) Evaluation:

- Continue assessment and discussion process to identify future tasks, such as development of evaluation criteria, data requirements, and training needs.
- Develop evaluation tools, quantitative and qualitative, such as conducting post-occupancy evaluations (objective and subjective) of LEED Silver Buildings or buildings with selected technology installations for energy efficiency improvements.

5) Policy Review and Recommendations:

- Continue discussion on energy-efficiency-only budget requests to improve the request process and information provided.
- Continue examination of potential policy recommendations from the Leadership Group, Buildings Working Group, Transportation Working Group, and the Environmental Practices and Procurement Working Group.

## **Individual Agency Responses**

A compilation of the responses from most State of Hawai‘i executive agencies may be found in the following section. Agencies were asked to report on their specific activities relating to Act 96 and Act 160, SLH 2006. Selected details from specific responses, such as vehicle fleet data, are attached as appendices.

DBEDT issued invitations to participate in this compiled report to all state executive branch departments, including attached agencies.

All departments and offices responded this year. They include:

AG: Department of the Attorney General  
B&F: Department of Budget and Finance  
DAGS: Department of Accounting and General Services  
DBEDT: Department of Business, Economic Development & Tourism  
DCCA: Department of Commerce and Consumer Affairs  
DHHL: Department of Hawai‘ian Home Lands  
DHRD: Department of Human Resource Development  
DHS: Department of Human Services  
DLIR: Department of Labor and Industrial Relations  
DLNR: Department of Land and Natural Resources  
DOA: Department of Agriculture  
DOD: Department of Defense  
DOE: Department of Education  
DOH: Department of Health  
DOT-Airports: Department of Transportation, Airports Division  
DOT-Harbors: Department of Transportation, Harbors Division  
DOT-Highways: Department of Transportation, Highways Division  
DOTAX: Department of Taxation  
FTZ: Foreign Trade Zone  
HCDA: Hawai‘i Community Development Agency  
HHFDC: Hawai‘i Housing Finance and Development Corporation  
HHSC: Hawai‘i Health Systems Corporation  
HPHA: Hawai‘i Public Housing Authority  
HSPLS: Hawai‘i State Public Library System  
HTA-CC: Hawai‘i Tourism Authority, Convention Center  
NELHA: Natural Energy Laboratory of Hawai‘i Authority  
PSD: Department of Public Safety  
UH: University of Hawai‘i system

**Consolidated LBE Reports from State of Hawai'i Executive Agencies  
Fiscal Year 2009-2010  
Relating to the Statutory Requirements of Act 96 and Act 160 of 2006**

**Act 96 SLH 2006: Buildings and Facilities**

- (1) Design and construct buildings meeting the Leadership in Energy and Environmental Design (LEED) silver or two green globes rating system or another comparable state-approved, nationally recognized, and consensus-based guideline, standard, or system, except when the guideline, standard, or system interferes or conflicts with the use of the building or facility as an emergency shelter.

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DOA, DOTAX, FTZ, HCDA, HTA-CC

**DAGS: ASSESSMENT:**

The Public Works Division (PWD) is currently working on a total of seven designated projects to achieve a LEED Silver rating for the Hawai'i State Public Library System (HSPLS), Hawai'i State Department of Defense (DOD), the Department of Public Safety (PSD), and DAGS. The seven projects are:

1. Mānoa Public Library - Expansion and Site Improvements, DAGS Job No. 12-36-6364  
The project's building permit approvals were delayed, but were finally approved in July 2009 and construction started in October 2009; it is currently scheduled to be completed in October 2011. The construction contract award amount for this project was \$8,159,000.
2. New Kohala Public Library, DAGS Job No. 11-36-6367  
The construction of this project has been completed and facility occupied since November 2010. It is anticipated that the project will achieve a LEED Gold rating. The construction contract award amount for this project was \$6,895,900.
3. Keaukaha Military Reservation – Joint Military Center, Phase 1, DAGS Job No. 21-14-7292  
The construction of this project has been completed and the facility has been occupied since June 2011. The project has achieved a LEED Silver rating in March 2011. This may be upgraded to a Gold rating, pending evaluation of additional construction phase points. The design-build contract award amount for this project was \$50,768,000.
4. Maui Regional Public Safety Complex, DAGS Job No. 15-27-5562  
This project is currently striving for a LEED Silver rating. The cost of the project is substantial with possibility the project may need to value engineer some of the sustainable design elements out, but strives to use as many sustainable design elements as possible. The project is now planned to be issued as a design-build request for proposal, which is scheduled to be issued in March/April 2012. Subject to funding and permit approval, the construction is estimated to start in April 2013. The current total estimated construction cost, including furnishing and equipment is \$225 million.
5. DAGS Hawai'i District Office, Kona Baseyard, DAGS Job No. 61-10-0634

This project is currently under design and the goal is to achieve LEED Silver rating. The estimated construction cost is \$3 million, and construction is anticipated to start in early 2012.

6. DAGS Hawai'i District Office, Hilo Baseyard, DAGS Job No. 61-10-0633  
This project is currently under design and the goal is to achieve LEED Silver rating. The estimated construction cost is \$4.5 million, and construction is anticipated to start in mid 2012.
7. New 'Aiea Public Library, DAGS Job No. 12-36-6152  
This project is currently under design and the goal is to achieve LEED Silver rating. The estimated construction cost is \$8.1 million and construction is anticipated to start in late 2012.

STRATEGY:

The previously described projects are part of developing a long term strategy. For the immediate strategy, the Division of Public Works will implement projects in accordance with Act 96, SLH 2006 "to the extent possible."

The DAGS-PWD general strategy in defining and applying "to the extent possible" is to take the following steps:

- 1<sup>st</sup> level: Look for and implement sustainable design practices that PWD does already; thus, no impact on operation/function and cost.
- 2<sup>nd</sup> level: Look for and implement sustainable design practices that PWD may not have normally done, but can do without negative impact to cost and to operation/function of the facility.
- 3<sup>rd</sup> level: Look for and possibly implement sustainable design practices that PWD may not currently do that are not very costly and improve operation/function of the facility. Associated costs, benefits, budget and maybe even schedule will start to become factors in deciding whether to implement.
- 4<sup>th</sup> level: Look for and possibly implement requirements that PWD may not currently do; how will impact cost and will improve operation/function of the facility. Associated costs, benefits, budget and schedule will be factors in deciding whether to implement.

Strategy also includes knowing what we to omit:

PWD should not implement sustainable design practices and elements that do not offer any real value. PWD does not want to implement sustainable design requirements to get LEED points just to achieve a rating that does not provide a real value; regardless, if the project budget would allow it.

As PWD gains the experience and knowledge from the projects that will occur over the year, PWD intends to develop a LEED or generically-stated, Sustainable Design and Commissioning application guideline; along with programmatic support for PWD and possibly other State agencies.

**DBEDT:** DBEDT has been active in promoting green buildings, offering LEED training and technical assistance for LEED projects to other state agencies and the public sector, and the adoption of energy efficient building codes.

Under a Green Building Technical Assistance Contract with DBEDT-Strategic Industries Division, Green Building Services completed and presented to the State of Hawai'i agency representatives, a LEED for Existing Building Operations and Maintenance (EB O&M) Toolkit and Education Program Manual for State of Hawai'i facilities. This LEED EB O&M Toolkit indicates how and what tools to use to measure and track progress toward the State of Hawai'i achieving LEED EB O&M Silver rating in their existing facilities.

DBEDT sponsored and coordinated LEED Credential Maintenance Program and LEED Green Associate Training and LEED EB O&M Training and Building Assessments for State of Hawai'i agency representatives. The speakers and topics were well-received by over 40 State of Hawai'i representatives from over 5 State of Hawai'i agencies. Trainees received a binder/training manual and discussed their progress toward achieving LEED silver. Opportunities and challenges were discussed for future capital improvements and policy development in support of the pursuit of more energy efficient and greener new and existing State of Hawai'i facilities.

DBEDT provided green building and LEED-related documentation and technical assistance through Green Building Services, consultant to the State of Hawai'i and DAGS, for a LEED EB O&M Project at the State of Hawai'i's State Office Tower and at the Honolulu International Airport (HIA). The HIA project achieved LEED-Commercial Interior (LEED-CI) Silver level this FY. This is the first state agency LEED-CI Silver level project in the state.

DBEDT provided testimony at the State of Hawai'i's Land Use Commission hearings in support of a LEED Silver level requirement for new large scale residential and mixed use developments on O'ahu and the Big Island that requested a land use reclassification from agriculture to urban. This was in support of the State of Hawai'i Clean Energy Initiative and the goal to achieve 70% clean energy by 2030.

On behalf of the State of Hawai'i, DBEDT renewed its membership with the US Green Building Council (USGBC). DBEDT continues to cosponsor a variety of LEED-related training sessions, from one-hour brown bag seminars at the American Institute of Architects (AIA)-Honolulu to full-day workshops co-sponsored by the USGBC Hawai'i Chapter on LEED Green Building Design & Construction and LEED Green Building Operations & Maintenance. DBEDT serves on the USGBC Hawai'i Chapter's Education and Green Schools Committees. DBEDT has helped coordinate and co-sponsor LEED workshops to prepare state personnel and others to take the USGBC's, now the Green Building Certification Institute's Green Associate, and other accredited professional (AP) examinations to become LEED Green Associates and LEED APs. In 2011 two (2) training sessions were held and 66 state employees attended.

DBEDT staff participated in monthly meetings of the AIA-Honolulu's Committee on the Environment, the Urban Land Institute's Sustainability Committee and the General Contractors Association of Hawai'i invited DBEDT to be co-Chair of the new Sustainable Construction and Renewable Energy Committee. Through participation in these committees and networks, DBEDT is able to leverage developing additional LEED and green building related educational opportunities for both public and private sector participants to raise the bar in educating project managers and consultants as well as building owners, managers, and facilities managers in the value of going green in new and existing facilities in the State of Hawai'i.

DBEDT has also used State Energy Program American Recovery and Reinvestment Act funding in support of developing additional green building technical assistance to continue some of the work initiated under the previous State of Hawai‘i General funded contracts.

The department helped to adopt a statewide building energy code based on the International Energy Conservation Code (IECC) 2006. Hawai‘i-specific amendments were made and included IECC 2009 building commissioning requirements. It is estimated that the amendments rendered Hawai‘i’s IECC 2006 more stringent than the model code. In 2011 the Hawai‘i Building Code Council approved Hawai‘i’s amendments to IECC 2009 which will strengthen the model code. The amendments include substituting reflective roofs and walls for certain insulation requirements, requiring hotel room card keys to shut off nearly all energy using equipment when leaving the room, and submetering retail spaces and high-rise living units.

**DHHL:** The Land Development Division started several projects this year with the Built Green and ENERGY STAR® program.

1. The 403-unit Kanehili Subdivision in East Kapolei has the following: solar water heating with a HECO approved 120-gallon water heater with automatic timer; 16 SEER air conditioner; a programmable humidistat to control humidity in the home for maximum energy savings; Icynene open cell spray foam insulation in the attic and R-11 insulation in the exterior walls which protects the entire home from outside noise, air infiltration, dust pollens, and allergens; dual glazed/low-e high performance vinyl windows offering extreme durability and superior UNV protection; a compact fluorescent system providing a longer bulb life span, lower operating costs, and lower temperature output; dual flush toilets; ENERGY STAR® rated appliances complement the energy savings program. Phase 1 of this project is currently in construction, with approximately 276 families already moved in.
2. Ka‘ūpuni Village, DHHL’s LEED Platinum subdivision, was completed in March 2011. This project consists of 19 affordable, net zero energy homes on 3.3 acres of land in Wai‘anae, O‘ahu. The project will include a number of green building features throughout the residences and community center. Among them are photovoltaic systems, efficient water and electrical fixtures, natural day lighting, ENERGY STAR® appliances, low-e dual glaze windows and ceilings, green building materials and resources, recycling centers, community gardens and aquaculture. The 19 families moved in May 2011.
3. The Kumuhau Subdivision is a LEED Silver project that will contain notable green features, which are standard in all homes. These features include solar water heaters, rainwater catchment systems, and solar photovoltaic panels. 45 native Hawai‘ian families were awarded single family lots for this subdivision with 33 of those families moved in.
4. In accordance with the American Recovery and Reinvestment Act (ARRA), DHHL was awarded \$10.2 million dollars to be used for infrastructure development and house construction for native Hawai‘ian families that are eligible to reside on Hawai‘ian homelands and whose total household income is below 80% of area median income level. Approximately 60% of the ARRA funds received were used for these eligible activities in Ka‘ūpuni Village and approximately 40% of these funds were used for eligible activities in East Kapolei II.
5. All future home developments will focus on being energy efficient.

The Land Management Division (LMD) continues to encourage general lessees and licensees to plan and design their facilities to meet the same energy-efficient programs. DHHL-LMD recently entered into a partnership with Keāhole Solar Power to lease land in Kalaeloa, O‘ahu for the largest Micro-scaled Concentrating Solar Power project in the State of Hawai‘i. The Kalaeloa



Solar One project will produce 5 megawatts of renewable energy for the island of O‘ahu. The Kalaeloa Solar One’s MicroCSP technology uses mirrored reflectors and optics to intensify solar energy, which in turn increases the system’s energy efficiency. The solar panels track the sun throughout the day which increases the amount of energy the system produces annually and the system includes thermal storage which enables energy to be produced during cloudy conditions or at night. Construction will begin later this year.

The Hawai‘ian Homes Commission has adopted DHHL’s Ho‘omaluo Energy Policy in January 2009. This policy enable native Hawai‘ians and the broader community working together to lead Hawai‘i’s effort to achieve energy self-sufficiency and sustainability.

**DHS:** The Department of Human Services (DHS) will continue to coordinate all building and facility projects with the Department of Accounting and General Services (DAGS) to ensure that all construction and repairs and alterations projects are in compliance with the applicable standards and guidelines.

**DLIR:** The Department of Labor and Industrial Relations (DLIR) does not own or manage any buildings. The majority of DLIR personnel are housed in building facilities constructed and managed by the Department of Accounting and General Services (DAGS). The remaining DLIR personnel are located in privately–owned buildings of which the DAGS Leasing branch secures all rental lease agreements. DLIR does not have any plans to design or construct any new buildings or facilities at this time.

**DLNR:** DLNR’s facility portfolio is limited. Most buildings owned by DLNR are composed of base yards, harbor facilities, and park restrooms. DLNR incorporates energy saving concepts into all of its owned facilities as appropriate. Energy saving concepts includes the use of solar water heaters, natural ventilation and lighting, use of energy-efficient lights, and water savings using waterless urinals or low flush toilets. Additionally, DLNR has begun to incorporate energy savings practices into design projects such as recycling existing asphalt and concrete pavement into backfill material. DLNR evaluates the feasibility of implementing energy conservation measures when capital improvement projects are designed. As DLNR staffs learn more about energy efficiency and environmental design, they will incorporate these concepts into building and facility design and renovations.

DLNR continues to work with the Department of Business, Economic Development, and Tourism (DBEDT) in a statewide collaboration on energy efficiency, as a member of DBEDT’s Lead by Example Leadership Group. DLNR will continue to work with the Leadership Group on ideas to implement energy savings across the state. As department staff learns more about such initiatives, they will incorporate such guidelines into DLNR standards.

**DOD:** The Hawai‘i Army National Guard follow federal military construction mandates, key energy directives include: EPAAct05, Executive Order 13423, EISA07, Executive Order 13514. All new building construction is to meet or exceed LEED Silver standards.

**DOE:** The DOE now designs all new buildings or facilities to meet the LEED silver standard. In addition, all architectural and engineering consultants who prepare the design specifications are required to have a LEED certified AP on their project team. ‘Ewa Makai Middle School, which has now completed construction, will be the first new DOE school to seek formal LEED Silver certification. Other on-going designs that adhere to LEED Silver or better standards include the Wailuku Elementary II and Kīhei High School.

During the past fiscal year, the Department has initiated a number of significant projects valued between \$7-\$10 million dollars that are designed to LEED Silver standards without seeking formal certification. These include:

- Na‘ālehu Elementary School- 4 classroom building
- Baldwin High School- new Library (LEED Certified)
- Pahoia High School- new gymnasium, under construction
- Campbell High School- new classroom buildings
- Mililani High School- 10 classroom building
- Kea‘au Middle School-new library
- Waialua Elementary- new library
- Kīlauea Elementary School- administration building
- Lahainaluna High School- cafeteria
- Hickam Elementary School- administration/library building

Although not specifically covered by Act 96, the DOE is moving toward the application of LEED standards to enhance sustainability and user comfort for major renovation and upgrade projects in existing buildings. These efforts include: (1) requirement for all new portable classrooms to comply with guidelines set by the California High Performing Schools (CHPS) program; (2) installation of “cool roofs” through the use of various coating and reflective materials, whenever roof repairs and replacement occurs; and (3) installation of solar powered lights in parking lots, solar powered night security lights on building exteriors and walkways, and solar powered attic fans in teacher housing units. The DOE has also begun to implement web-based controls for air conditioning systems to allow for centralized control of these systems, which lead to a higher efficiency, while lowering user intervention. Proven technologies such as desiccant wheels that remove moisture from air condition spaces more efficiently are being deployed with chilled water systems or separately to supplement packaged air conditioning systems. Solar tubes have been retrofitted for some classroom spaces in an effort to reduce lighting loads and to bring more natural daylight promoting student performance.

**DOH:** The DOH is not constructing any new buildings; however, any renovations will incorporate these standards.

**DOT-Airports:** DOT Airports’ New Day Program (Modernization projects) is on hold pending the results of a bridging document, estimated to be completed in November 2011. After the document is completed, pending on the result and direction of the document, the Program may need to be revised. However, any new projects will be planned for LEED Silver – new construction. The Consolidated Car Rental Facility project is planning for LEED Silver – new construction. The design is scheduled to be completed after July 2013.

**DOT-Harbors:** DOT-Harbors trains staff on LEED methodology, requiring design consultants and construction contractors to be knowledgeable of and able to comply with Act 96 SLH 2006. Also, DOT-Harbors ensures that all designs for new construction meet LEED silver certification and develop program milestones to encourage 100% implementation over a period of time.

**DOT-Highways:** The Highways Division requires design consultants to comply with ACT 96, SLH 2006 and ensures that all new design work meets LEED silver certification.

**HHFDC:** New Construction (NC): All developers requesting funding approval are required to include the best standards of construction in order to best reduce their impact on the power grid and increase their sustainability factor.

Existing Buildings (EB): All Property Management Coordinators and assigned Property Management Company vendors are expected to look at every maintenance/repair function along with all replacement purchases with respect to its affect on the total sustainability of the projects.

**HHSC:**

- **Samuel Mahelona Memorial Hospital** - Requested funds for the master planning of the overall facility.
- **O'ahu Region** - For all new construction, the O'ahu Region of HHSC will assess the cost of LEED building criteria. If the cost for LEED design exceeds the budget of the project, then the project will incorporate as many energy conservation measures as possible. For long range planning, the O'ahu Region will try to include LEED design costs whenever possible.
- **West Kaua'i Medical Center** - Requested funds for the master planning of the overall facility.

**HPHA:** Agency project engineers ask design consultants to include LEED design principles in all work products.

**HSPLS:** The construction of the new Mānoa Public Library is estimated to be completed by October 2011. The construction contract of \$8,159,000 was awarded to Allied Pacific Builders, Inc. and the project will achieve at least the LEED Silver rating.

The Construction of the new North Kohala Public Library has been completed and the facility has been occupied since November 2010. The construction contract of \$6,895,900 was awarded to Isemoto Contracting Co., Ltd. and it is anticipated that the project will achieve the LEED Gold rating. This may be upgraded to a Platinum rating, pending submittal of additional construction phase information.

The new 'Aiea Public Library is currently under design and the goal is to achieve LEED Silver rating. The estimated construction cost is \$8.1 million and construction is anticipated to start in late 2012.

**PSD:** PSD has in the past and continues to rely on the lead taken by the DAGS-PWD as follows:

1. Selections of LEED qualifications-based consultants who prepare the construction bidsets:
2. Public Works contract general conditions requiring strict adherence with nationally recognized standards, guidelines, etc. to ensure full compliance with Act 96/SLH 2006:
3. Complete review by DAGS-DPW/Technical Services Branch of all construction bidsets to ensure aforementioned requirements have been met.
4. Construction projects are periodically reviewed to ensure compliance is being met during the construction period.

PSD has recently engaged the services of an energy savings company under a Guaranteed Energy Savings Agreement at the O'ahu Community Correctional Center and the Halawa Correctional Facility. This contract will retro commission a number of energy-savings measures at these facilities that will results in annual energy savings of nearly \$2.0 million over the next twenty (20) years.

## **UH:**

### ASSESSMENT:

- UH Mānoa – Campus Center Renovation and Addition currently under construction with goal for LEED Silver.
- UH Mānoa – New Classroom Building currently under planning with goal for LEED Silver.
- UH Mānoa – C-MORE has been completed; and LEED Gold pending USGBC approval.
- UH Mānoa – Cancer Research Center of Hawai‘i currently under construction with a goal for LEED Gold.
- UH Mānoa – Kuykendall Hall Renovation currently under design with goal for LEED Gold.
- UH Mānoa – Snyder Hall Renovation currently under design with goal for LEED Gold.
- UH Mānoa – Webster Hall Translational Health Science Simulation Center currently under design with goal for LEED Silver.
- UH Mānoa – Gartley Hall Renovation funded for design with goal for LEED Silver.
- UH Hilo – Hawai‘ian Language Building currently under construction with goal for LEED Silver.
- UH Hilo – Sciences and Technology Building currently under construction with goal for LEED Silver.
- UH Hilo – Student Services Building Addition and Renovation currently under construction with goal for LEED Silver.
- UH Hilo – College of Pharmacy currently under planning and design with goal for LEED Silver.
- UH Hilo – Living Learning Community Phase 2 currently under planning and design with goal for LEED Silver.
- UH West O‘ahu – New campus development in Kapolei currently under construction with goal for LEED Silver.
- UH Maui CC – Science Facility currently under construction with goal for LEED Silver.
- Kapi‘olani CC – Culinary Institute of the Pacific facilities at the former Cannon Club site along Diamond Head currently under design with the goal of LEED Silver.
- Leeward CC – Education and Innovation Instructional Facility currently under design with goal for LEED Silver.
- Windward CC – Library and Learning Center facility currently under construction with goal for LEED Silver.
- Honolulu CC – Advanced Technology Training Center currently under design with a goal for LEED Silver.
- Hawai‘i CC – Hale Aloha (3383) pending start construction with goal for LEED Silver.
- Hawai‘i CC – West Hawai‘i new campus development Phase 1, designed with goal for LEED Silver.
- Systemwide – Information Technology Center design completed and RFP pending with goal for LEED Silver.

### STRATEGY:

The University of Hawai‘i will continue to apply the LEED rating system in all Capital Improvement Program new and major renovation projects. Sustainability guidelines are being included in the development for all campus long range development plans and project development reports. In general, the goal is to reach LEED Silver rating certification. If the goal cannot be attained due to budget constraints, then other Sustainable design principles will be incorporated into the new or major renovation projects.

## Act 96 SLH 2006: Buildings and Facilities

- (2) Incorporate energy-efficiency measures to prevent heat gain in residential facilities up to three stories in height to provide R-19 or equivalent on roofs, R-11 or equivalent in walls, and high-performance windows to minimize heat gain and, if air conditioned, minimize cool air loss. R-value is the constant time rate resistance to heat flow through a unit area of a body induced by a unit temperature difference between the surfaces. R-values measure the thermal resistance of building envelope components such as roof and walls. The higher the R-value, the greater the resistance to heat flow. Where possible, buildings shall be oriented to maximize natural ventilation and day-lighting without heat gain and to optimize solar for water heating. This provision shall apply to new residential facilities built using any portion of state funds or located on state lands.

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DLNR, DLIR, DOA, DOH, DOT-Airports, DOT-Harbors, DOT-Highway, DOTAX, FTZ, HCDA, HSPLS, HTA-CC, NELHA

### **DAGS:**

#### ASSESSMENT

The PWD very rarely will be involved in residential facilities; however energy-efficiency measures to prevent heat gain can apply to any facility. These measures are already taken into design consideration when applicable.

#### STRATEGY

The strategy for PWD is finding ways to improve through raising awareness of energy-efficiency measures, enhancing the review of designs, and considering new products and technologies.

**DBEDT:** DBEDT was involved with a number of activities that sought to incorporate energy efficiency measures in facilities statewide and was recognized for its efforts.

Hosted by the National Governor's Association (NGA), State of Hawai'i representatives from DBEDT, the Department of Accounting and General Services (DAGS), and UH-Community Colleges (UH-CC) traveled to Racine, Wisconsin, in July 2010, to participate in the 2010 Energy Policy Academy on Building Efficiency Retrofit Programs with representatives from other states. The State of Hawai'i's delegates discussed energy efficient building retrofit programs such as the State of Hawai'i's Energy Action Plan and projects in support of improving energy efficiency in new and existing state facilities, increasing the use of renewable energy technologies for state facilities, and the State of Hawai'i's "Lead By Example" (LBE) program to help meet the goals of the Hawai'i Clean Energy Initiative (HCEI). Using the following strategies supported by the NGA, the State of Hawai'i focused on working with state agencies to promote and support Energy Savings Performance Contracting and Power Purchase Agreements.

DBEDT coordinated the May 2011 Build & Buy Green Conference & Expo at the Hawai'i Convention Center, which was attended by approximately 400 participants, including many from state agencies. The topics were: greening affordable housing, green schools, green campuses, greening existing facilities, (including many that are and will be Leadership in Energy and Environmental Design (LEED) certified, silver, gold and platinum levels) as well as net-zero energy homes and green and net zero energy communities. HCEI and related policies and projects were presented during a track of breakout sessions during the conference.

DBEDT provided testimony at the State of Hawai'i's Land Use Commission hearings in support of a LEED Silver level and ENERGY STAR® requirement (which includes the use of energy efficiency measures such as insulation, cool roofs, high performance windows and solar hot water) for new, large-scale residential and mixed-use developments on O'ahu and the Big Island that requested a land use reclassification from agriculture to urban. This was in support of the HCEI and the goal to achieve 70% clean energy by 2030.

DBEDT sends out notices and incentives to the various LBE Working Groups to invite them to attend training and education opportunities such as for LEED, ENERGY STAR®, Build and Buy Green, and Rebuild Hawai'i Consortium meetings.

DBEDT staff were included in and recognized in the DAGS' Team of the Year Award and the Comptroller's Perpetual Trophy for the Team of the Year. The Award is in recognition of the Energy Savings Performance Team which is a \$34 million project covering 10 Downtown buildings with over 1 million square feet of office buildings. The project also includes \$2.9 million in American Recovery and Reinvestment Act funds to install photovoltaics on the Kalanimoku building. The entire Team included various divisions within DAGS, as well as staff from the Department of the Attorney General and the Department of Budget and Finance.

In September 2010, four years after initiating LBE, the American Council for an Energy-Efficient Economy nationally announced the LBE Program as part of their "18 State-Led Energy Efficiency Programs Recognized As Best In U.S." and that Hawai'i was one of four states in the "Five Top Energy-Efficiency Award Winning Programs." The State's LBE Program also was recognized by the Energy Services Coalition, a national organization supporting performance contracting, as first in the nation for per capita investment in performance contracting.

**DHHL:** DHHL will continue to promote, design, and build new affordable homes using the green technologies to ensure building of new energy and resource efficient homes in Hawai'i.

**DHS:** As applicable, DHS will continue to coordinate these activities with DAGS to effect energy-efficient measures.

**DOD:** DOD will be educating design personnel and A&E teams to include an insulation component to roof repair projects. Currently DOD is planning a pilot building with foam insulation, to include data loggers to measure & verify (Bldg 306, Ft. Ruger). The agency is reviewing ENERGY STAR® windows and window tinting, main concerns are that many HI-ARNG buildings are on SHPO list. In addition, a daylighting project is in construction for FY11 (Wahiawa Armory).

**DOE:** The DOE designs all roofs on new facilities to meet the R-19 or equivalent insulation standard. The DOE also installs additional insulation when re-roofing older roofs to meet the R-19 standard or equivalent insulation standard where feasible. New schools are designed to meet LEED Silver standards and combine the use of insulation with proper building orientation to maximize natural ventilation, daylight use, and solar water heating applications as appropriate.

The DOE designs all new schools and facilities to meet the R-11 or equivalent insulation standard but does not retrofit walls of existing buildings unless there is a clear cost benefit or requirement for the health and safety of occupants. However, facilities with large air conditioning systems that serve multiple classrooms are being retrofitted through insulation and energy-efficient windows to minimize heat gain and cool air loss where feasible.

In addition, the DOE has begun a number of pilot projects to look into the feasibility of various heat abatement strategies other than air conditioning. These efforts include a heat abatement project at 'Ewa Beach Elementary School and at Kahuku High School. These projects have taken advantage of various heat reduction strategies to lower operating costs, while increasing comfort levels. Specific strategies deploy the use of ceiling fans, heat reflective paint, cool roofs, insulation, thermal walls, landscaping, solar light tubes, larger window spaces, etc. The DOE has incorporated combinations of applications from these studies that would be most beneficial to address those situations where heat reduction is a significant and immediate concern. These findings are being implemented in the department's energy neutral portable initiative at 'Ewa Elementary which is slated to be completed in the fall of 2011.

**HHFDC:** Whenever feasible it is required that all new housing developers build to the above standards of R-19 and R-11 insulation values in the ceilings and walls respectively and incorporate solar water heating strategies.

As major building renovations are planned and completed every effort is exerted to insure that the greatest benefit is derived from any changes in design and materials. Examples:

1. On two high rise buildings (Pohulani Elderly and Kamake'e Vista) the failing low slope pitch and gravel roofing system was removed and replaced with a custom formed foam insulation foundation topped with a white single-ply membrane system. This provided insulation where there was none before, coupled with the highly reflective white outer coating. This significantly improved the habitability of the top floor units.
2. Both high rise buildings were completely repainted on all exterior surfaces with a color scheme that was from a lighter color pallet. This vastly improved the overall reflectivity of the surfaces thus reducing the absorption of the sun rays. This factor will increase the overall life span of the painted surfaces and improve the interior temperature.

**HHSC:** When any renovations to existing residential facilities are planned, HHSC will incorporate energy efficiency measures to prevent heat gain whenever possible.

**PSD:** DAGS-PWD Contract General Conditions call for adherence to all applicable federal, state and local statutes, ordinances, etc. All design teams are obliged to comply with these requirements and to certify the same.

**UH:**

- **UH Hilo** – Existing resident halls are not air conditioned. The Student Life Center has a heat pump water heating system with a natural gas backup system. Data logs show the natural gas backup system was activated only one time for two hours in a year's time frame.
- **UH Maui College** – Existing resident halls are not air conditioned and are closed. There are facilities to be repurposed.

**HPHA:** Agency project engineers ask design consultants to include energy-efficiency measures in all work-products. Currently, in the processes of procurement for proposals to furnish professional energy performance contracting consultant services.

## Act 96 SLH 2006: Buildings and Facilities

(3) Install solar water heating systems where it is cost-effective, based on a comparative analysis to determine the cost-benefit of using a conventional water heating system or a solar water heating system. The analysis shall be based on the projected life cycle costs to purchase and operate the water heating system. If the life cycle analysis is positive, the facility shall incorporate solar water heating. If water heating entirely by solar is not cost-effective, the analysis shall evaluate the life cycle, cost-benefit of solar water heating for preheating water. If a multi-story building is centrally air conditioned, heat recovery shall be employed as the primary water heating system. Single family residential clients of the Department of Hawai'ian Home Lands and any agency or program that can take advantage of utility rebates shall be exempted from the requirements of this paragraph so they may continue to qualify for utility rebates for solar water heating.

This section does not apply to the following agencies: AG, B&F, DHRD, DLIR, DOTAX, DCCA, DOH, DOT-Airports, DOT-Harbors, FTZ, HCDA, HSPLS, NELHA

### **DAGS:** ASSESSMENT

Typical DAGS managed State Office Buildings do not utilize enough hot water to make installation of solar water heating systems “cost-effective”.

### STRATEGY

The DAGS overall strategy is to continue encouraging our “clients (other State agencies that seek technical support and assistance from DAGS)” to consider using solar water heating systems in their projects, whenever feasible or advantageous to the State.

**DBEDT:** While DBEDT does not design, construct or operate any facilities, DBEDT continues to provide technical assistance to State of Hawaii agencies. This includes assistance on solar water heating, to entities such as the Department of Hawaiian Home Lands (DHHL) on projects such as work done through a Memorandum of Understanding with DHHL for the use of ARRA funding to the State of Hawaii to install solar water heaters in 400 DHHL homes.

**DHHL:** The State of Hawai'i received \$2.9 million in economic stimulus American Recovery and Reinvestment Act (ARRA) funds to provide DHHL lessees with energy efficiency retrofits to their homes to reduce energy consumption and costs. A minimum of 400 low-income DHHL lessees will be able to receive solar water heating systems and/or CFL light kits thru a partnership between the Department of Hawai'ian Home Lands (DHHL), the Department of Business Economic Development and Tourism (DBEDT), and the Department of Labor and Industrial Relations (DLIR).

The primary goal of this program is to reduce each household energy costs by 30% each year, which equates to five barrels of oil per year. A second goal is to create or sustain about 32 jobs in the local clean energy industry. A third goal is to obtain comprehensive data on energy usage and cost savings on all participants of the program.

**DHS:** As applicable, DHS will continue to coordinate these activities with DAGS to maximize energy efficiency and cost effectiveness.

**DLNR:** DLNR's facility portfolio is limited. Most buildings owned by DLNR are composed of baseyards, harbor facilities, park cabin, restrooms and picnic facilities. DLNR incorporates



energy saving concepts into all of its owned facilities as appropriate. Energy saving concepts includes the use of solar water heaters and the retrofit and replacement of lighting and electrical systems. DLNR evaluates the feasibility of implementing energy conservation measures such as use of solar water heaters when capital improvement projects are designed. As DLNR staff learns more about energy efficiency and solar water heating design, they will incorporate these concepts into building and facility design and renovations.

**DOA:** Very few HDOA facilities have a need for water heating systems, however, for certain appropriate retro-commissioning projects; HDOA will consider the cost-benefit of incorporating a solar water heating system.

**DOD:** All new construction projects have life cycle cost analysis done to verify whether or not solar water heating systems payback period is feasible. FY11 there is new construction in Hilo, KMR-AFRC. It includes three solar water heating systems, 14 panels, and five 120-gallon tanks. For existing water heaters, being replaced, life cycle cost analysis is done for a solar water heating alternative. Due to daily staffing, many armory buildings do not have enough usage to payback within a period of time.

**DOE:** The DOE school cafeteria kitchens use gas water heaters and boilers. Gas water heating is economically more efficient than electric water heating, thus limiting opportunities. However, the DOE will start a pilot study to determine the life cycle costs for solar water heating for a school cafeteria and/or locker rooms, either to replace gas water heating or to preheat water. Other water heating opportunities will be looked at, such as heat recovery from existing walk-in refrigeration compressors, both to preheat water and to increase efficiencies of the walk-in cooling.

**DOT-Highways:** The Highways Division will perform life cycle cost analysis when replacing water heating systems. The Kaua'i District Office has installed an "on-demand" propane water heating system.

**HHFDC:** Whenever feasible new housing developers are installing solar water heating systems on single and multi-family housing projects.

Presently, only one of our housing projects on the Big Island of Hawai'i (La'ilani Housing) is equipped with roof top mounted solar water heating systems. The original installations are twenty plus (20+) years old and have, in the past few years, begun to fail. They are being replaced with more efficient up-to-date units.

**HHSC:** HHSC shall evaluate the benefit of solar water heating for their facilities whenever improvements are planned or funded.

**HPHA:** Project engineers ask design consultants to include solar water hearing systems with gas-powered backups where cost-effective.

**HTA-CC:** The Hawai'i Convention Center evaluated solar water heating in 2008 and it was not cost effective, based on the limited frequency that hot water is needed in the facility, due to fluctuating event schedules and occupancy of the building. When there are large quantities of hot water needed in the building, it is on relatively short notice, for short durations and periods of time, which does not make solar power practical and efficient as an energy source. To add a solar

water system to the building would require capital cost that would not have substantial savings due to its infrequent use and therefore the life cycle cost would not be a prudent use of funds.

**PSD:** PSD and DAGS-PWD are currently in the process of developing the Maui Regional Public Safety Complex at Pu'unene, Maui. The design is reflective of the intent of Act 96 and has extensively evaluated and analyzed its mechanical engineering requirements under Act 96.

PSD and DAGS-PWD are also examining the other facility projects to ensure that replacement equipment can take advantage of solar heating, etc.

**UH: ASSESSMENT:**

- Honolulu CC - pending solar water heating installation at Cafeteria and Cosmetology with performance contract
- Leeward CC - pending solar water heating installation with performance contract
- UH Maui College – The College is in negotiation with an Energy Service Company to install a wide range of energy efficiency systems, one of which is to install a solar water heating system at the Culinary Building.
- Hawai'i CC- new Model home 2010-11 was completed with solar water system.
- UH Mānoa – The newly constructed C-MORE Hall and the funded renovation work for Edmondson Hall, Gartley Hall, and Kuykendall Hall all employ solar water reheating systems for the central HVAC systems. Solar water reheating is employed in planned new construction and renovation projects where economically feasible.

**STRATEGY:**

The University of Hawai'i systemwide will continue to apply the LEED rating system in all Capital Improvement Program new and major renovation projects. The design principles for solar water heating systems where it is cost effective will be incorporated into the building to the extent possible

**Act 96 SLH 2006: Buildings and Facilities**

(4) Implement water and energy efficiency practices in operations to reduce waste and increase conservation.

This section does not apply to the following agencies: NELHA

**AG:** All departmental staff has been provided tips on energy-efficient practices and information on the benefits of energy efficiency. Reminders of the benefits of energy-efficient practices are sent out several times a year. With the assistance of DAGS, signs have been posted to remind staff to turn off computers, lights, and other equipment when exiting. Water leaks are to be reported to the Administrative Services Office immediately, including sprinkler systems and outdoor faucets.

**B&F:** The Department encourages employees to initiate and implement energy-efficient practices (i.e. turning off office lights when not in use or when leaving for the day, turning off computer terminals at the end of the day, distributing ENERGY STAR® saving tips, etc.). The Department stresses the importance of energy saving efforts initiated by DAGS and DBEDT.

**DAGS:** As funding has become available, the department has initiated various energy conservation/efficiency projects for DAGS facilities, Statewide. The projects are in various stages of design and construction. These projects include: the replacement of aging air conditioning and elevator equipment; retrofitting with energy-efficient electronic ballasts and super T-8 lamps; delamping; the installation of protective tinting on building windows to reduce heat gain; the installation of low-flow plumbing fixtures; the installation of electric hand dryers; and installation of photovoltaic (PV) systems.

DAGS-PWD is currently working on the following photovoltaic system projects to lower energy bills:

1. Central Services Division, New Photovoltaic System, DAGS Job No. 52-10-0642

This project is currently in construction, and consists of the installation of a 100 kW PV system at the DAGS Central Services Division baseyard in Mapunapuna. A net metering agreement between the State and HECO will be executed.

2. In addition, there are three projects that will be under design this year to install photovoltaic systems on four state buildings in Honolulu. These include the Keelikōlani Building, the Queen Liliuokalani Building, the Makai Parking Garage (Lot A) and Motor Pool (Lot P.)

Another innovative use of PV panels in architecture and art is the No. 1 Capitol District Building, Courtyard Revitalization and Other Improvements, DAGS Job No. 22-10-0613

This project is currently in construction, and will be installing an innovative use of PV cells into a glass art canopy. This is an example of artistic integration of PV into building materials, and will be an educational exhibit for visiting school children and other visitors.

In FY 2009, DAGS-PWD executed a contract for an Energy Savings Performance Contracting (ESPC) project involving 10 buildings in the State Capitol District, which includes the State Capitol building. This ESPC project will provide over \$34 million worth of improvements and services with a guaranteed annual savings of at least \$3 million in utility and operating costs over a 20-year period.

In FY 2011, an Invitation for Proposals solicitation for the DAGS Buildings, Statewide, ESPC project, which includes 32 facilities on five islands, was issued. This ESPC project will provide a minimum 20% reduction in utility costs of the baseline 2010 usage and have guaranteed savings over a 20-year period.

In addition to DAGS facilities, DAGS-Central Services Division (CSD) and DAGS-PWD staff have worked with the Hawai‘i State Public Library System (HSPLS) in implementing energy efficiency practices. The status of projects being accomplished by DAGS for the HSPLS is:

- Completed window tinting projects for certain libraries statewide;
- Constructing or completed construction of Photo Voltaic systems on the following Public Libraries: Waimea and Hanapepe on Kaua‘i; Wai‘anae and ‘Āina Haina on O‘ahu; Kahului on Maui and Kailua-Kona on Hawai‘i Island.
- Completing retro-commissioning studies at libraries statewide.

DAGS, on behalf of the Department of Public Safety (PSD), has initiated an Energy Savings Performance Contracting (ESPC) project for various PSD facilities on O‘ahu (Halawa Medium Security Correctional Facility; Halawa High Security Correctional Facility; O‘ahu Community Correctional Center; and the Laumaka Work Furlough Center)

DAGS on behalf of the Department of Health (DOH) is currently doing some minor energy savings projects

DAGS-CSD notes the following water and energy efficiency practices are currently being implemented for water conservation - As part of the ESPC project with NORESKO LLC, WeatherTRAX, a satellite based irrigation control system has been installed at ten major state office buildings located in the Downtown, Honolulu, civic center area. The system monitors weather conditions and shuts down landscape irrigation systems when there is sufficient rain. The system also monitors the operation of the irrigation systems and provides reports related to water consumption, leaks and other malfunctions in the system.

**DBEDT:** DBEDT encourages water and energy efficient practices in operations through the Hawai‘i Green Business Program, a statewide certification and recognition program for entities that are implementing programs to reduce energy, water and waste in their offices and building operations. The program uses checklists which also serve as a tool to guide entities toward greener office practices. Checklists have been created for hotels and resorts, offices and retail, and restaurants and food service businesses. The program is jointly administered by DBEDT, the Department of Health, the City and County of Honolulu Recycling Office and Board of Water Supply. A significant portion of the certification programs are dedicated to water and energy efficiency as well as recycling and pollution prevention. In FY11 seven (7) hotel/resort, five (5) office/retail, and one (1) food service/restaurant organizations were recognized in Spring 2011 under the Hawai‘i Green Business Program.

With the Lead By Example Resource Efficiency Checklist, two (2) entities were recognized for their efforts.

DBEDT also provides technical assistance to support labeling ENERGY STAR® State of Hawai‘i buildings. DBEDT arranges and promotes training in ENERGY STAR® Portfolio Manager, an online tool for comparing building performance with similar buildings nationwide and provides building managers information that helps prioritize investment. To date 18 state facilities have received the ENERGY STAR® certification, which means the building ranks in the top 25% of similar buildings nationwide.

**DCCA:** Maintained a schedule whereby the landscape is watered during the evening hours and water time limited to five minutes at each station. Monitored cost and consumption data for air conditioning usage; air conditioning shut down during weekends, holidays and furlough days. Reviewed temperature data and made adjustments to correct areas of inefficiencies. Continued to monitor and adjust lighting sensors in our main office building for optimum levels of operation. Continued practice of using compact fluorescents for all exterior lighting. Disseminated DAGS memorandum on energy and other conservation measures.

DAGS energy projects:

- Installation of sinks with low-flow fixtures and sensor faucets
- Installation of low-flush and sensor-controlled toilets and urinals

- Replaced higher wattage lamps with the new super T-8 lamps changing the watts from 32 to 25 in retrofitted lighting fixtures
- Monitored lighting schedule in common areas and made adjustments accordingly
- Maintained delamped hallways
- Where practicable, Encouraged the use of desk lamps or other forms of task lighting in lieu of overhead lighting in areas where there is adequate natural lighting

The King Kalākaua Building has received the Environmental Protection Agency's (EPA) ENERGY STAR® Designation for the second year in a row.

**DHHL:** DHHL plans to circulate educational pamphlets to homesteaders and staff on water and energy-efficiency practices to encourage waste minimization and increase conservation.

**DHRD:** The department continues to encourage all employees to implement energy conservation practices. Examples include turning off hallway and elevator lobby area lights at the end of the day; and turning off copier machines and computers rather than leaving the equipment on sleep mode.

DAGS implemented the following water and energy conservation initiatives for the Leiopapa A. Kamehameha (LAK) building, which this department occupies: (a) installed window tinting to help keep the solar heat out of the building and reduce the air conditioning cooling load; and (b) installed a power management program on all computers to generate utility savings and reduce the amount of carbon dioxide emitted into the atmosphere.

**DHS:** DHS continues to issue water and energy conservation procedures for buildings and offices, in coordination with procedures issued by DAGS.

**DLIR:** DLIR will work with DAGS to incorporate some of the following conservation measures:

- Replace old toilets and sinks with low-flow fixtures (toilets and sinks).
- Replace old lighting fixtures.
- Request that DAGS Leasing Branch conduct energy efficiency analyses in privately-leased buildings and work with landlords to replace old toilets, sinks, air conditioners, and lights.
- Replace light switches with motion sensors.
- Replace paper towel dispensers with hand blowers.

**DLNR:** The department installs low-flow fixtures (toilets and sink faucets) to replace older fixtures, which use more water, as department facilities are renovated. Additionally, some remote restrooms use composting toilets, which require very little water. The department has installed waterless urinals in some boat harbor improvements. Additionally in fall of 2010, the DLNR participated in DAGS' Energy Savings Performance Contract to generate utility savings through computer power management. This project was implemented through our IT office and installed desktop power management software in PCs in the Kalanimoku building.

Staff is reminded to turn off equipment when not in use, keep blinds closed, and report equipment malfunctions. Energy-efficient light bulbs are used where feasible and timed sensors have been installed to allow automatic shutoff of lights. Additionally, natural ventilation and lighting are used in most comfort stations/restrooms. When purchasing new equipment the department tries to purchase energy-efficient machines when available, such as energy-efficient copiers, etc. The

department also tries to remind staff to turn off computers and other appliances that are not in use or at the end of the day.

**DOA:**

1. Continued to retrieve information electronically on gas consumption and odometer readings from DAGS Automotive Management Division, Tesoro and Hawai'i Petroleum. Continue to use vehicle refueling log for programs that have vehicles that refuel at places other than DAGS, Tesoro and Hawai'i Petroleum.
2. Continued to retrieve information electronically on gas consumption and odometer readings for each vehicle from DAGS Automotive Management Division, Tesoro and Hawai'i Petroleum.
3. Monitored and compiled kWh consumption data and cost for electricity for FY11.
4. Distributed DAGS memo requesting employees to conserve energy and to report any water waste from open faucets, leaky plumbing fixtures, and broken and/or inefficiently run irrigation systems.
5. Developed spreadsheet to compare FY 2011 data to FY 2008, FY 2009, and FY 2010 on electricity kWh consumption and percentage increase/decrease from previous year and distributed to program managers for their review and information.

**DOD:** Building Energy Monitor program established in 2008. Staff to report leaks ASAP. FY11, Several Water Efficient Landscape designs to progress. RTI (Waimanālo) and Bldg 1898 (Kalaeloa).

**DOE:** The DOE has an internal system that enables the comprehensive managing of all utilities – electricity, water, sewage disposal, and gas – for all schools through a central office with the anticipated goal to monitor and track utilities for high usage.

As of July 1, 2007 a School Energy Conservation Program has been in effect for all DOE schools. The Program takes a school's historical average of electrical energy use and compares this average to actual electrical consumption monthly. Adjustments are made to the historical average (baseline) to account for any new load changes such as new facilities, equipment, and/or energy conservation measures. Schools pay for ½ of the energy cost for energy consumption above the baseline and receive a "rebate" for ½ the energy cost energy consumption below the baseline biannually.

During the past year the department has met with ESCOs, UESCs, PPA, and UH (Sponsored Grants) entities to investigate the possibility of initiating programs for schools in the DOE.

- Energy Service Company (ESCO)-Utility Energy Services Contracts (UESC)-Power Purchase Agreements (PPA) Effort: Investigative work will continue in the areas financing energy conservation equipment retrofitting with the assistance of ESCO, UESC, and PPA.
- DOE Operations and Maintenance Best Practices: DOE internally will in the future hold internal meetings between offices and branches that will align and focus energy conservation efforts. This can include product (material and method) selection by committee based upon maintenance, performance, LEED, and cost benefits. This can be with further education and training for more efficient use of existing technology such as air conditioning and lighting controls, smart utility metering, sub-metering, etc.

- DOE School Best Practices: An investigation for identification of school equipment and/or operations that may best benefit energy conservation with the least amount of negative impact to school operations and functions will be reviewed. This will also include procurement and availability of energy-efficient products or products favoring LEED criteria. This can involve school scheduling and selection of facility use or setting of temperatures for air conditioners.
- Retro-Commissioning: Work has begun to implement “low cost” and “no cost” measures recommended in the retro-commissioning report completed for Ma‘ili Elementary School in January 2011. The report describes existing operating conditions of the school’s campus-wide chilled water air conditioning system, and recommends measures for improving equipment performance and efficiency. The report estimates that an annual 238,500 kWh of electricity can be saved when all measures in the report are implemented.
- A RFP for a photovoltaic project for schools on Kaua‘i was posted in June 2011 and should be awarded to a vendor in the fall. The department is also engaging with utility companies on O‘ahu, Hawai‘i, and Maui to replicate what is being done on Kaua‘i. During the past year the department has also met with an ESCO to investigate the possibility of initiating a program for schools in the ‘Ewa complex.
- Partnership with University of Hawai‘i, CTAHR as a sponsor for the application and approval of an Environmental Protection Agency (EPA) Grant that will focus on Best Practices for school landscape management. Approval for this Grant (“Irrigation and Nitrogen Best Management Practices for Sustainable Use of Natural Resources and Environmental Protection”) allows for a total project funding of approximately \$150,000 that provides expertise in the areas of soil conditioning, water use, grass selection, etc. as a pilot study for three DOE schools on O‘ahu. Also, as part of the 18-month grant, irrigation water benchmarking will be included, along with a sample food waste audit. The end goal is to determine how to “beautify” the school campus using the least amount of resources. Currently DOE expends \$4.5M for water use (est. \$2.25 for irrigation) and at least \$2M for tipping of garbage waste with food waste as a primary driver for daily disposals.

**Immediate steps for conservation programs continue and are listed as follows:**

1. Continue with implementation of LEED Silver for new and major construction projects.
2. Continue training for LEED New Construction and LEED for Schools as updated by USGBC.
3. Continue with installation of low-flow bathroom fixtures whenever fixtures require replacement.
4. All incandescent lamps will be replaced with compact fluorescent lamps (CFL).
5. Continue meetings with vendors seeking new energy conserving technologies. Continuation with pilot (test) studies of new promising technologies.
6. Open discussion with the Board of Water Supply to seek innovation water conservation concepts, projects, and/or studies such as Irrigation Management Control System, plant species, drip irrigation, and captured rainwater.
7. A pilot project to recycle wet food waste from the cafeteria to pig farmers is being done to determine if it will have a significant collateral effect on the volume of refuse waste at Keone‘ula Elementary School.

**Immediate steps for school conservation (Electricity) are listed below:**

- Set air conditioning so that the room temperature is 76 degrees.
- Air conditioning is not turned on until 7:00 a.m. or (if the air conditioning unit is turned on and off manually) until the room temperature reaches 74 degrees, which ever comes later, and turned off no later than 4:30 p.m.
- Use timers to turn off 75% of night lights between the hours of 10:00p.m. and 6:00a.m.
- Replace all appliances (refrigerators, microwave ovens, toasters, coffee makers, rice cookers, etc.) in classrooms and offices with ENERGY STAR® rated appliances. Personal appliances should be limited to no more than one of each on each floor of a building. All other personal appliances were removed by December 31, 2008.
- Purchase or lease only ENERGY STAR® rated computers, copiers, printers, and servers.
- Turn off computers, printers, and copiers at the end of the day.
- As of July 1, 2010, all schools are required to maintain their reduced electrical consumption levels. These levels established in 2009-10 with central chiller A/C systems have reduced their energy usage by 16%. All other schools have reduced their baseline by 6%.

**Immediate steps for school conservation (water) are listed below:**

- All schools and offices shall cut back on water usage by at least 10 percent. Water lawns early in the morning or late in the afternoon or evening.
- Timers on automatic sprinklers shall be adjusted to water the lawns on Sundays, Tuesdays, and Thursdays, either before 9:00 a.m. or after 5:00 p.m.
- Manually water lawns on Mondays, Wednesdays, and Fridays, either before 9:00 a.m. or after 5:00 p.m.
- Car wash fundraisers shall be curtailed.
- Flooding water beds or shooting down Lāna‘i areas is highly discouraged.
- Planned development of a water usage tracking system that overlaps high water usage tracking system employed by the Board of Water Supply. This tracking system will identify slow developing leaks that can go undetected by BWS under their tracking system. Reduce water flow in bathroom faucets by turning down water pressure.

**DOH:** The DOH continues to limit air conditioning operation in its buildings to only core work hours. The DOH continues to limit overhead lighting operation in its buildings to only core work hours. Desk lamps must be used outside of these hours.

**DOT-Airports: ASSESSMENT**

The Airports Division must try to minimize water usage, but must also be mindful of the time constraints on passengers. The airport is exempt from rules on low-flush toilets to accommodate high use and passenger time restrictions, but implements sensors for toilet flushing and sink use to keep from wasting water.

The Airports Division utilizes R-1 water where possible and non-potable water for landscape irrigation. As an example, Kona International Airport at Keāhole uses the effluent from their Wastewater Treatment Plant for irrigation, while Honolulu International Airport uses non-potable water from the Sumida Watercross Farm for irrigation.

At Honolulu International Airport and Dillingham Airfield, the Airport has a Contract with an outside firm to provide monitoring of the water system so leaks can be found and repaired quickly to keep from wasting water. Meters are also read and checked against prior usage to see if there is a spike in water usage, which may indicate a problem.



## STRATEGY

The airports must try to conserve energy usage, but must also be mindful of the comfort level of the passengers and workers.

At Honolulu International Airport, there is an Energy Monitoring and Control System (EMCS) to turn off lights in areas that are not in use and reduce or eliminate air conditioning in these same areas.

Current project: Air Conditioning Modifications, Phase II, Overseas Terminal Chiller Plant, Honolulu International Airport. Project Number: AO1107-18. The project is under construction, completed approximately 90%. Schedule to be completed by end of 2011. Anticipated receiving HECO rebate, estimate of \$250,000. The new energy-efficient equipment is part of the new Chiller Plants / loop System which will enable chillers to be shut down during low utilization periods and to operate on fewer chillers, but at a higher efficiency.

At Kona International Airport at Keāhole, plans are continuing for the use of cold “deep sea” water for chilled water for cooling enclosed areas.

DOTA has been working with Highway, Harbors, Foreign Trade Zone and University of Hawai‘i to contract Power Purchase Agreement (PPA) of PV system over existing facilities. Currently, the awarded PPA locations in Design phase include Lāna‘i Airport, Kona International Airport, Waimea Kohala Airport, and other facilities. See attached sheet for details.

### **DOT-Harbors:**

Water efficiency:

- Check for and fix leaks as soon as possible.
- Install low-flow toilets, low-flow shower heads and faucet aerators as practical.
- Install timers or require staff to conduct irrigation and watering of plants during early morning or evenings to reduce water lost to evaporation. Adjust watering time down to the minimum required to keep green growth on landscape areas.
- Develop program milestones to encourage 100% implementation over a period of time.

Energy efficiency:

- Install timers onto HVAC and/or motion detectors onto lighting systems and other equipment facilities as appropriate.
- Install tinting to windows and glass doors as appropriate.
- Monitor lighting levels and use natural window/skylight lighting when sufficient.
- Turn off lights in room not in use.
- Develop program milestones to encourage reduction of energy consumption over a period of time.

### **DOT-HWY:**

The Highways Division conservation measures include:

- Using electronic documents where possible to eliminate the need for paper.
- Working with the construction industry to incorporate the use of recycled products in pavement construction without losing pavement quality.
- Encouraging double-sided printing from copiers and printers as practical.
- Set provisions for recycling white paper and corrugated cardboard at the main office building.

**DOTAX:** DAGS is currently implementing the following energy saving initiatives in the Keelikōlani Building:

- Infrastructure work for air conditioning controls (routing DDC communication cables in ceilings and air handle rooms) is currently being performed. This is part of DAGS' Energy Savings Performance Contract.
- Window tinting was installed to the inside of all windows in March. It helps keep the solar heat out of the building, thus reduce the AC cooling load.

**FTZ:** The FTZ, in conjunction with DOT-Airports, has completed a solicitation and is in negotiations to install a 550-kW photovoltaic system on the roof of its five-acre facility. When completed, this PV system will provide approximately 70% of the Zone's energy needs and effectively reduce the FTZ's energy costs to zero for the following twenty (20) years.

The FTZ converted essential warehouse lighting over to CFL bulbs, which effectively reduced the necessary lighting down to just eight (8) high-efficiency CFL bulbs used for security purposes.

The FTZ installed two 40-ton chiller units and one 50-ton unit eight (8) and five (5) years ago, respectively. These units were purchased and installed based on a 2001 Energy Feasibility Study of the Foreign-Trade Zone's needs prepared by Global Engineering & Construction, LLC. Approximately forty (40) new individual air conditioning units with high efficiency motors were purchased and installed in 2007 which were also based on the 2001 Energy Feasibility study for the Foreign-Trade Zone. The FTZ uses only T8 fluorescent lights in its administrative and tenant offices.

**HCDA:** HCDA installed a surfactant injection system within Kaka'ako Waterfront and Makai Gateway parks that should result in savings of water consumption of up to 60%.

**HHFDC:** All Property Management Companies and Individual Project Managers have been advised of the Department of Water Supply recommendations for watering hours and duration. As a precaution to insure all this is adhered to HHFDC Property Management Coordinators review each water bill submitted for reimbursement. Gallon usage is monitored to observe any unusual up-spike, not associated with an increase in residency.

Additionally, and nothing new is that each new resident is informed upon checking-in for tenancy that water is a common area expense and should not be wasted. It is explained to them that this expense has a direct relationship to any future rent increase.

Other ways to expand our reduction of waste and increase our conservation measures are simple.

- 1) Perimeter offices are asked to use natural light whenever possible.
- 2) Requested that everyone turn off their computer and monitor at the end of each day and when not in use for long periods of time during the day (at least set up to hibernate).
- 3) Perimeter window glass has been recoated with a more reflective tint coating.
- 4) Restroom and Lunchroom tri-fold paper towels have been replaced with battery operated roll paper dispensers (material cost savings).
- 5) Replaced Pohulani Elderly's swimming pool heat pump with a new more efficient model.

**HHSC:** HHSC facilities continue to replace existing water closets with low water flush water closets whenever possible.

**HPHA:** Agency utilizes low-flow water closets and showerheads where cost-effective and requires the use of CFL light fixtures

**HSPLS:** HSPLS is working with DAGS, Public Works Division and its Central Services Division to implement many energy efficiency projects. DAGS on our behalf has completed window tinting projects for dozens of libraries statewide to reduce heat gain. DAGS is constructing or has completed construction of six photovoltaic system projects at the following public libraries: Waimea and Hanapepe on Kaua‘i; Wai‘anae and ‘Āina Haina on O‘ahu; Kahului on Maui; and Kailua-Kona on Hawai‘i Island. They are also completing the investigation phase retro-commissioning projects for a number of libraries on various islands. The benchmarking of public buildings as required in Act 150, SLH 2009 is also included with these retro-commissioning projects using the ENERGY STAR® portfolio management or equivalent tool for all public libraries meeting these criteria.

**HTA-CC:** Emphasis in both water conservation and conservation of energy are daily practices at the Hawai‘i Convention Center.

Water conservative drip irrigation was recently installed in September 2011 in two large interior landscape planters, to replace the traditional sprinkler irrigation that was there previously. The Landscaping department also monitors weather and rain conditions on an ongoing basis to amend the exterior landscaping as needed, without leading to overwatering.

All air conditioning units and their ancillary equipment are part of a computer programmable system that regulates the building usage, by nodes and sections. Lighting is also controlled through a similar programmable computer system. When areas of the facility are not in use, those areas can be programmed “off” in order to conserve electricity. When event groups are in the building, specific area needs can be isolated and necessary air conditioning and lighting is in operation to minimize the electrical footprint. The staff is well educated on the conservation of cooled air, and makes every effort to work with the event client to limit the amount of doors kept open for periods of time. Large-scale fans have also been installed in the Lobby foyer in order to keep air flow in motion to supplement the air conditioning systems, rather than unnecessarily turning down the air conditioning temperature settings.

Variable frequency drives (VFDs) are currently being added to a fan motor system that operates on our dock area, which will provide intermittent operation of the fan motors, rather than a continuous power supply that is not necessary.

In addition back in 2007, lighting retrofits and replacement bulb and ballast packages were installed in the exhibition halls, ballrooms, administrative areas, parking garage, and the fire stairwells, which have also resulted in reduction of energy usage over time.

**PSD:** The Guaranteed Energy Savings Agreement mentioned earlier is a start in the right direction for PSD. Eventually, all other facilities will be involved.

#### **UH: ASSESSMENT**

- UH Hilo – New construction includes dual flush valves on the toilets (1-gallon for grey water, 3-gallon for brown solids). All the faucets and showers have low-flow heads. Existing facilities have been and are continuing to be converted to these same low use devices in campus restrooms, locker rooms and dormitory shower facilities. The campus does not irrigate the

landscapes as Hilo's rain forest climate average 140" rain a year. Only new installations are temporarily irrigated until the plants are well established.

- UH West O'ahu – No new plans
- Hawai'i CC – Cafeteria, replace old walk-in refrigerators/freezer, new awning windows, AC split system. Electronics, replace old chiller with AC split system. Campus-wide delamp light fixtures. Sub-meter four shops and two portable buildings to monitor electrical costs.
- Honolulu CC – Plans to sub-meter the irrigation system, phase-1 in construction. Replace toilets, urinals, and lavatory fixtures with low-flow type valves and moderators.
- Kapi'olani CC – Sub-meter the irrigation system in construction. Replace toilets, urinals, and lavatory fixtures with low-flow type valves and moderators.
- Leeward CC – Currently in planning stages of a rainwater recovery system whereby the campus would convert an existing dive tank pool to a water catchment basin to irrigate the lower campus; and plans to sub-meter the irrigation system. Replace toilets, urinals, and lavatory fixtures with low-flow type valves and moderators.
- Kaua'i CC – Plans to replace toilets, urinals, and lavatory fixtures with low-flow type valves and moderators.
- UH Maui College – Installed waterless urinals in the Student Center building. Have installed dual flush toilets in its Nursing building. The College is in negotiation with an Energy Service Company to install a wide range of efficiency systems which include efficient plumbing fixtures, waterless urinals, etc, campus wide.
- Windward CC – Sub-metered cooling towers and campus irrigation system. Replace toilets, urinals, and lavatory fixtures with low-flow type valves and moderators. Planning to upgrade and repair the Agriculture's turf management program with more efficient irrigation systems.
- UH Mānoa – Continues to perform between \$20 million and \$40 million in energy retrofits per fiscal biennium as funding permits. These retrofits have allowed UH Mānoa to achieve an average annual consumption reduction of 6% per year since FY 2006.
- UH Mānoa – Continues to operate the UH Mānoa "Green Days" program which shuts down participating building HVAC systems during weekends and holidays which reduces the total annual usage by over 1%.

#### STRATEGY:

The University of Hawai'i systemwide will continue to implement water conservation and energy efficiency practices in operations through its repairs and maintenance programs.

#### **Act 96 SLH 2006: Buildings and Facilities**

- (5) Incorporate principles of waste minimization and pollution prevention, such as reducing, revising, and recycling as a standard operating practice in programs. This includes programs for waste management in construction and demolition projects, and office paper and packaging recycling programs.

**AG:** All purchasing staff has been advised to first consider recycled materials, especially paper, when reviewing and processing purchase requisitions. AG's offices continue to utilize the recycle bins in the copier rooms, and within each division boxes are provided for recycling paper. Staff has also been trained to save and transmit documents electronically, whenever possible. This past May the department, along with Tax and Labor, hosted a recycling event to dispose of broken furniture and recycling materials at no cost to the State. The recycler, Schnitzer Steel Hawai'i Corp., will submit a check, which will be deposited into general funds, to the Department of Taxation for the value of metal and other materials recycled during the event.

**B&F:** The Department participates in an office paper recycling program.

**DAGS:** DAGS has incorporated into its Design Consultant Criteria Manual boiler plate language for construction waste management for LEED projects. DAGS-CSD notes that for incorporation of principles for waste minimization and pollution prevention, programs are in place at 13 state office buildings serviced by DAGS for the recycling of white paper and cardboard.

**DBEDT:** DBEDT promotes the Lead By Example Resource Efficiency Checklist to agencies that are implementing programs to reduce energy, water and waste in their offices and building operations. The program uses checklists which also serve as a tool to guide agencies toward greener office practices, systems and products.

DBEDT facilities in the Capitol District offer paper, newspaper, cardboard and beverage container recycling.

**DCCA:**

- Blue recycle bins are used to facilitate paper recycling in the department. Recycled paper is picked up weekly by a vendor contracted through DAGS.
- The department has disseminated information on e-waste recycling facilities and will take advantage of another disposal event sponsored by UH if available.

**DHHL:** Staff has been encouraged to recycle office paper and other recyclables whenever possible. The Land Development Division is encouraged to incorporate waste management programs in their development/construction contracts to minimize waste and pollution prevention.

**DHRD:** The department recycles office paper, cardboard boxes, used printer cartridges, and telephone books. This year, a project team made up of staff from the Departments of Human Resources Development (DHRD), Budget and Finance, and DAGS-Information and Communications Services Division joined forces to streamline the process of tracking employee payments for various benefit programs administered by DHRD. Through the combined efforts of the project team, they were able to eliminate the need and cost to generate and transport the reams of report output required to track proper payment disbursements related to the benefits programs.

**DHS:** DHS continues to implement waste minimization and recycling procedures, consulting with the appropriate agencies such as DAGS and DOH.

**DLIR:**

- Divisions are making it a practice to schedule regular recycling of paper
- Recently, DLIR participated in a recycling project (Aloha 'Āina Earth Day) to dispose old equipment. All money generated from the recyclable waste was deposited to the State Treasury.
- DLIR will continue to look for ways to reduce waste and recycle wherever possible.

**DLNR:** DLNR encourages its staff to implement office paper, computer equipment, printer ink cartridges recycling, and such a program as are in place. DLNR has begun to incorporate energy savings practices into design projects such as the recycling of existing asphalt and concrete pavement into backfill material.

**DOA:**

1. Continued to work with DAGS to have Island Recycling on O‘ahu pick up two bins of white paper once a month that employees place in recycling bins.
2. Continued to collect empty soda cans for recycling.

**DOD:** Executive Order 13514 mandates increased waste diversion and pollution reduction. In FY11, TEC Inc. revamped HIARNG’s Integrated Solid Waste Management Plan. A prior FY03 ISWMP is outdated. Recycle bins and areas are located at major sites.

**DOE:** Construction projects which incorporate LEED standards require strategies for waste management and recycling of construction materials. The recycling of office paper and packaging is being explored, however, the additional cost of such programs do not make recycling feasible at this time due to budget restrictions. More schools on O‘ahu, however, participated in the Honolulu City and County community recycling bin program for 2011. In addition, schools are incorporating recycling activities into their fundraising programs. The department is also exploring the option of recycling food waste to pig farmers through a pilot project at Keone‘ula Elementary School. A zero-waste pilot project is also being initiated at Kalani High School. This pilot project aims to recycle all recyclable waste to minimize the school’s waste stream. These schools are also exploring the feasibility of compacting trash to reduce the overall refuse volume going to the landfills. Schools are also establishing “Green Clubs” which promote the three R’s of sustainability: reduce; reuse; and recycle.

**DOH:** The DOH continues to promote recycling in all of its offices.

**DOT-Airports:** The Airports Division has implemented a statewide dedicated unit for environmental compliance. This consists of Environment Health Specialists located at the major airports (Honolulu International Airport, Kona International Airport at Keāhole, Kahului Airport and Līhu‘e Airport) to ensure compliance with all environmental regulations and provide training to tenants and employees with regards to environmental regulations.

In most of the terminal renovation or maintenance projects specification has included Construction Waste Management Section 01524 as part of the General Requirement Standard Specification. This has been part of the contract requirement for contractor to recycle construction waste.

At all airports, we recycle white paper and cardboard and monitor the amount recycled. Glass, newspaper, plastic and aluminum recycling is made difficult by security regulations at airport locations but recycling programs are in place at all our major airports.

**DOT-Harbors:**

- Reduce printing emails, reduce faxes, reuse one-sided printings.
- Require double-sided printing from copiers and printers as practical.
- Recycle all recyclables as practical. Provide recycling bins for aluminum cans, bottles, plastic and papers where convenient.
- Develop program milestones to encourage 100% implementation over a period of time.

**DOT-Highways:**

- Using electronic documents where possible to eliminate the need for paper.
- Working with the construction industry to incorporate the use of recycled products in pavement construction without losing pavement quality.

- Encouraging double-sided printing from copiers and printers as practical.
- Provisions for recycling white paper and corrugated cardboard at the main office building.

**DOTAX:** This past May DOTAX, along with Dept. of Labor and Attorney General, hosted an Aloha ‘Āina recycling event to dispose of scrap metal from non-freon appliances, computers and monitor, printer cartridges, newspaper, telephone books, broken furniture and other recycling materials at no cost to the State. The recycler, Schnitzer Steel Hawai‘i Corp., will submit a check, which will be deposited into general funds, to DOTAX for the value of metal and other materials recycled during the event.

**FTZ:** The FTZ recently began a cardboard recycling program where tenants and Zone users can place their cardboard boxes and shipping materials in a designated recycling area. This measure has effectively reduced the FTZ’s solid waste refuse volume by forty (40) percent. The FTZ also recycles cans and newspapers. These recyclable products are captured in designated containers throughout the Zone and taken to the recycle center once a quarter.

**HCDA:** HCDA has incorporated recycling of bottles, cans, plastic and paper within its office. In demolition projects, contractor is encouraged to separate and recycle materials whenever practical. During fiscal year, HCDA relinquished one of its state vehicles. At Kewalo Basin harbor, HCDA has established protocol for spills that pose danger of entering the harbor and stenciled the storm drains.

**HHFDC:** Trash / refuse collection is based on volume. Each contract is based on the size of collection bins, the number of bins and the number of collections per week. Collections are constantly monitored for overage charges. Whenever possible, dry waste is removed from bins to allow for the dumping of odorous waste. Not all bins are filled for pick up each time this is monitored. All shipping container boxes are flattened and disposed of accordingly. Most importantly is the fact that each tenant is reminded of minimizing waste products upon their initial registration and upon completion of their Annual Unit Inspection (AUI). Maintenance staff personnel are trained to spot waste and pollution, to report it and if able to, take immediate steps to correct the situation. HHFDC feels that knowledge is a great weapon against waste and pollution.

**HHSC:**

- **Samuel Mahelona Memorial Hospital** - No construction is currently taking place at SMMH. We currently have a cardboard recycling program and work with the county when recyclable or other than recyclable waste can be disposed of. We also have a confidential paper recycling program in place.
- **O‘ahu Region** - The O‘ahu Region facilities have implemented recycling as standard operating practice.
- **West Kaua‘i Medical Center** – Currently, has a cardboard recycling program and works with the county when recyclable or other than recyclable waste can be disposed of. The center also has a confidential paper recycling program in place.

**HPHA:** Provides monthly waste paper recycling program for central offices.

**HSPLS:** HSPLS participates with DAGS’ recycling program for office paper and cardboard pickup for all our libraries and offices. The two new library projects mentioned in (1) include waste management as a major component in achieving LEED certifications.

**HTA-CC:** The Hawai'i Convention Center continues to have an extensive recycling program for both administrative areas and events.

Separate trash and recycling receptacles are placed throughout the facility, in both public areas and in the administrative offices and back-of-house areas. Items regularly collected for recycling include paper, cardboard, plastic, aluminum, glass, telephone books, foam core boards, toner cartridges, computer e-waste, pallets, and construction waste.

In addition, there is a partnership with show management to maximize the recycling of event material, packaging, and exhibits. When there is an associated food service component, donations of the excess food are made to charitable organizations.

Purchasing decisions support sustainable practices from cradle to grave, such as purchasing product in bulk to minimize individual packaging and participating in the redistribution asset management program with the State of Hawai'i for re-use of materials that would otherwise be discarded.

**NELHA:** No action in this area this year.

**PSD:** The prisons and jails are working diligently to develop individual facility programs e.g. they have replaced the fluorescent lights with ones for greater efficiency; they have replaced boilers and washing machines with more energy-efficient ones; and they have reduced the water heads for showers to more efficient ones. At the same time, Noresco is working at Halawa and O'ahu Community Correctional Center to improve energy efficiency, and this will be the model for other facilities.

**UH:**

- **UH Hilo** – The campus actively reuses waste paper for internal non-official communications. UH system has adopted a policy that all communication with student is by email, greatly reducing the paper mail being generated and sent.  
The campus has a new and active MIXED recycling process, where all types of paper, plastic #1, 2, 5, clean metal cans, glass are all recycled versus taken to the landfill. The old program involved SORTED recycling, and the new mixed recycling process should more than double the amount of recycled to an estimated 132,000 cubic feet of waste now being diverted from the landfills.  
Also the campus has an active beverage redemption program where HI-5 containers are collected and managed by the student clubs and service organizations on campus.  
The University's practice is to buy recycled goods that meet the EPA's current guidelines, including reduction in packaging and buying in bulk quantities where practical.  
UH Hilo just completed another round of e-waste recycling, sending back 9 pallets of computers at an estimated weight of 4,500 pounds.
- **UH West O'ahu** – The faculty, staff and students do an informal voluntary recycling of HI-5 aluminum cans and plastic bottles that are recycled by the janitorial staff. UHWO continues to recycle white and mixed color paper collected in the mailroom.
- **UH Maui College** – College is working on becoming a member of ASHRAE. UH Maui College has installed recycling stations campus wide.
- **Leeward CC** – Campus-wide paper recycling program initiated during the 2009-10 academic year with the placement of paper recycling containers and bins in every office and classroom



across campus. Also, a solid waste compactor will be installed to reduce construction and solid waste.

- **Windward CC-** In the new Library Learning Commons building, there will be a recycling station for materials on campus that can be recycled.
- **Honolulu CC-** Hi-5 and paper container has been stationed on campus to minimize waste. Also, a solid waste compactor will be installed to reduce construction and solid waste.
- **Kapi‘olani CC-** A solid waste compactor will be installed to reduce construction and solid waste.
- **Hawai‘i CC** – Campus wide paper, cardboard, and HI recycling program.
- **UH Mānoa** – On-going campus –wide recycling and program that recycles cans, plastics, paper products, and green waste reducing the total waste-stream by 37%.

### Act 96 SLH 2006: Buildings and Facilities

- (6) Use life cycle cost-benefit analysis to purchase energy-efficient equipment such as ENERGY STAR® products and use utility rebates where available to reduce purchase and installation costs.

**AG:** All staff involved in purchasing equipment have been advised of the ENERGY STAR® program and must document reasons for not purchasing ENERGY STAR®, when available.

**B&F:** The Department will include the use of life cycle cost-benefit analysis where applicable.

#### **DAGS:**

1. Mechanical equipment (i.e. A/C, pumps, etc.) have long been required by DAGS to be of the high efficiency type and utility rebates have been used to help offset installation and higher pricing costs for the energy-efficient products. In FY 2008, DAGS worked with HECO to improve internal procedures to insure utility rebates are not missed and currently have those procedures in place.
2. DAGS considers cost/benefit analysis for replacing existing A/C systems with new, more efficient, systems even prior to the existing systems reaching their expected life span.
3. ENERGY STAR® equipment, where available, will be a standard requirement for all construction.

**DBEDT:** DBEDT has and continues to advocate for ENERGY STAR® Product Awareness and Procurement, which includes the following activities:

- Providing technical assistance to housing, local government, state and/or federal agency representatives in purchasing ENERGY STAR® products.
- Promoting other training opportunities such as on-line ENERGY STAR® webcasts in areas such as ENERGY STAR® Procurement and Products, and Computer Power Management.

**DCCA:** DCCA uses life cycle cost-benefit analysis to evaluate computer equipment purchases such as servers and PCs. The department continues its practice of purchasing ENERGY STAR® products for all available computer equipment, and as applicable will purchase ENERGY STAR® products when replacing office equipment.

**DHHL:** Fiscal Office and staff involved in purchasing equipment for the office and development projects are encouraged to look at ENERGY STAR® products and use rebates

where available to reduce purchase and installation costs. Furthermore, our new development, Ka'ūpuni Village, is built with the latest ENERGY STAR® appliances available.

**DHRD:** The department uses the State Procurement Office price/vendor lists for procurement of most of its equipment. Copiers that are leased and computers that are purchased are ENERGY STAR® products.

**DHS:** DHS procurement procedures include requirements for purchasing energy-efficient products such as ENERGY STAR®, and as applicable will utilize available utility rebates.

**DLIR:** The DLIR programs are required to purchase ENERGY STAR® products and will continue to check whether utility rebates are available and can be utilized in the purchase of the products as part of the procurement procedure/policy.

**DLNR:** DLNR uses life cycle cost-benefit analysis to purchase energy-efficient equipment such as ENERGY STAR® products, and uses utility rebates where available to reduce purchase and installation costs.

**DOA:** ASO sent reminder to staff of department's Energy and Water Conservation and Resource Efficiency Program which provides policies, guidelines, and practices with goal to minimize energy, fuel, and water consumption and implement resource-efficient operations including purchasing energy-efficient equipment such as ENERGY STAR® products and use utility rebates where available.

**DOD:** Per federal mandates, all equipment is specified ENERGY STAR® rated or energy efficiency equivalent.

**DOE:** The DOE is encouraging all schools and offices to purchase ENERGY STAR® or any energy-efficient alternative equipment that passes life cycle cost-benefit analysis. The DOE applies for and receives utility rebates for various energy-efficient equipments being installed during construction projects. The total rebates the DOE received for equipments installed during FY 2010-2011 was about \$234,853 with an annual kWh reduction of 1,780,297. DOE will continue to seek utility rebates for on-going project work and seek establishment of utility rebates for new energy-efficient technologies.

**DOH:** The DOH only purchases ENERGY STAR® products in all of its construction projects.

**DOT-Airports:** Energy efficiency in equipment is always a requirement practice in Cooling Towers, Chillers and other HVAC, Elevators, Escalators, Mechanical and Electronic equipment at all airports. Construction projects which have mechanical and electrical equipments are required to be energy-efficient products.

All appliance specifications and purchases are required to be the energy-efficient type such as ENERGY STAR® products whenever it is available.

**DOT-Harbors:** DOT-Harbors trains staff on life cycle cost analyses and on available ENERGY STAR® technologies and replaces existing equipment with comparable ENERGY STAR® equipment.

**DOT-Highways:** The Highways Division continues to install energy-efficient traffic signal lamps in new installations or when traffic signals are modified and has programmed the replacement of computer equipment with ENERGY STAR® compliant equipment.

**DOTAX:** DOTAX uses life cycle costs to evaluate equipment procurements and will use utility rebates where available to reduce purchase and installation costs.

**FTZ:** The FTZ purchased six new energy-efficient computer systems over the past two years, replacing older, less efficient models. The FTZ is also in the process of procuring an updated copier printer which will replace a less efficient model.

**HCDA:** HCDA has instructed property manager in projects where HCDA is general partner to replace light fixtures, air conditioners, stoves and refrigerators with energy-efficient fixtures.

**HHFDC:** As stated in previous years, all of the property management staff in-house and vendors have been informed of the benefits of ENERGY STAR® products. All appliances installed in residential apartments have the highest ENERGY STAR® rating possible. This stipulation has also been placed in laundry vendor contracts; that all machines need to be ENERGY STAR® rated since all power used is a direct operating expense. Within HHFDC's office operations, only ENERGY STAR® rated office equipment are procured.

**HHSC:**

- **Samuel Mahelona Memorial Hospital** - SMMH currently purchases ENERGY STAR® products when applicable such as window a/c units and appliances.
- **O'ahu Region** - The O'ahu Region has incorporated in its procurement process the acquisition of ENERGY STAR® products and other energy saving equipment whenever possible.
- **West Kaua'i Medical Center** – WKMC currently purchases ENERGY STAR® products when applicable such as window a/c units and appliances.

**HPHA:** Project engineers require the use of Energy Star appliances. Currently in procurement for proposals to furnish professional energy performance contracting consultant services which will assist the agency in identifying and benefiting from rebates where available.

**HSPLS:** HSPLS, in working with DAGS, has always used life cycle cost-benefit analysis for replacing all of our air conditioning systems with more energy-efficient ones (including ENERGY STAR® products) sometimes even prior to these older systems reaching their expected useful life span. HSPLS continues to work very closely with DAGS and all the utility companies across the State to insure that all available rebates are not missed and are processed as quickly as possible. These rebates are applied against all related future utility and servicing costs.

HSPLS utilizes ENERGY STAR® products where applicable and practical at all of our public libraries and facilities.

**HTA-CC:** The lighting change-out project discussed in #4 above contained the installation of ENERGY STAR® products in the exhibition halls, ballroom, administrative areas and fire stairwells. When new equipment purchases are evaluated, ENERGY STAR® ratings are considered in the cost-benefit analysis.

Currently in engineering design is a project to install variable frequency drives (VFDs) to a water treatment pumping system for the waterfall feature in the Lobby. This project will qualify for HECO incentive rebates, as there is not currently VFDs in place for operation of the pumps.

**NELHA:** New computers were ENERGY STAR® rated.

**PSD:** Like item (5) above, this measure is also a work-in-progress. PSD recently bought an energy-efficient dishwasher for Waiawa and plan to replace any equipment in prisons and jails with more energy-efficient models. All correctional facilities, as well as other PSD operational programs, are being encouraged to take full advantage of potential energy savings being offered by energy-efficient equipment.

**UH:**

- **UH Hilo** - Continue to work with HELCO in their rebate program to purchase energy-efficient air-conditioning and lighting through the campuses repairs and maintenance programs. The campus practice is to decommission old inefficient refrigerators, air conditioners, ice makers, dehumidifiers, and replace these products with energy-efficient models that meet the ENERGY STAR® criteria.
- **UH Maui College** – The College has implemented a campus policy that requires all programs to purchase “ENERGY STAR®” rated equipment or appliances. Relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment.
- **Windward CC** - Energy-efficient equipment are being purchased to replace non-efficient ones. Rebates have been received as a result of this concerted effort. Relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment. PC monitor control software and vending machine controls.
- **Kapi‘olani CC** - Relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment. PC monitor control software and vending machine controls.
- **Leeward CC** – Relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment. PC monitor control software and vending machine controls.
- **Honolulu CC** – Relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment. PC monitor control software and vending machine controls.
- **Kaua‘i CC** - ending contract for relamping existing lighting throughout the campus to energy-efficient lamps/bulbs with occupancy sensors and installing energy management controls to all AC equipment.
- **UH Mānoa** – in FY 2011 UH Mānoa received over \$100,000 in HECO rebates from the installation of energy-efficient HVAC and lighting equipment.

**STRATEGY:**

The University of Hawai‘i systemwide will continue to apply the LEED rating system in all Capital Improvement Program new and major renovation projects

## Act 96 SLH 2006: Buildings and Facilities

(7) Procure environmentally preferable products, including recycled and recycled-content, bio-based, and other resource-efficient products and materials.

This section does not apply to the following agencies: HCDA

**AG:** Recycled paper is required, unless previously approved by the Administrative Services Office. Staff is aware of the policy to utilize environmentally friendly products; however, there is very minimal use of hazardous materials within the department.

**B&F:** The Department currently purchases environmentally preferred products as contained in the SPO price lists.

**DAGS:** The State Procurement Office (SPO) continues to provide to Executive Departments, and other chief procurement officer (CPO) jurisdictions (DOE, OHA, HHSC, Judiciary, Legislature), including the counties, SPO Price and Vendor List contracts utilizing ENERGY STAR®, recycled, or environmentally preferred products (EPP). Prior to re-solicitation for new contract terms, assessments of current contract specifications and review of market availability are conducted to ensure energy-efficient products and supplies are made available through the SPO Price and Vendor lists such as:

- WSCA Facilities Maintenance Repair & Operation (MRO) Price List #11-10 offering green products such as cleaning products with the Green Seal or equal certification;
- SPO Price List #10-08 disposable polyethylene bags, including biodegradable bags;
- SPO Price/Vendor List #11-07, Office Supplies and Printer Cartridges offering recycled paper and paper products, remanufactured printer cartridges.

For products and supplies not covered by SPO Price and Vendor list, purchasing agencies are required to utilize the following preferences:

- Recycled Products, HRS §103D-1005
- Biofuel preference, HRS §103D-1012
- Preference for oil products with greater recycled content, HRS chapter 103D, Part XIII

**DBEDT:** DBEDT continues to encourage compliance with, and other encourage agencies to comply with, environmentally preferable purchasing guidelines set forth in Ch 196-9, HRS.

DBEDT procured office and copy paper with 30% post-consumer recycled content, and other office products with recycled content.

DBEDT worked with the UH Mānoa in developing the 2011 Environmental Product Guide to be available online next year.

DBEDT disseminates the results of an Environmentally Preferable Purchasing (EPP) survey conducted annually by the Department of Health via the Lead By Example report to improve awareness of purchasing patterns between agencies. In 2010 EPP among state agencies lead to greenhouse gas savings equivalent to removing approximately 93 passenger vehicles from

roadways for one year and energy savings equal to conserving about 17,188 gallons of gasoline in a year.

**DCCA:** DCCA purchases energy-efficient ENERGY STAR®, recycled, or environmentally preferred products, and supplies available through the SPO Price and Vendor lists whenever possible including recycled-content paper and other non-paper goods.

**DHHL:** The Fiscal Office has been requested to look into buying environmentally preferred products and material whenever available.

**DHRD:** The department purchases environmentally preferable products as contained in the State Procurement Office price/vendor lists. Office paper and toner cartridges are examples of items purchased that are recycled content products.

**DHS:** DHS continues to coordinate with the State Procurement Office (SPO) to ensure that price list products satisfy environmentally preferable product requirements.

**DLIR:** The DLIR coordinates with the State Procurement Office in the purchase of environmentally preferable products including recycled and recycled-content, bio-based, and other resource-efficient products and materials.

**DLNR:** DLNR encourages the use of recycled products with contractors. DLNR also adheres to the allowed 10% price preference for bids using recycled products in accordance with Section 103D-1005, Hawai‘i Revised Statutes.

**Division of Aquatic Resources (DAR)**

DAR purchases and uses biodegradable soaps. In particular, DAR uses these products in the Northwest Hawai‘ian Islands, where there are strict policies on this and any other discharge of durable wastes.

**DOA:** ASO sent reminder to staff of department's Energy and Water Conservation and Resource Efficiency Program which provides policies, guidelines, and practices with goal to minimize energy, fuel, and water consumption and implement resource-efficient operations including promoting 4 Rs – reduce, recycle, reuse and re-buy, and encouraging use of the Department of Business, Economic Development and Tourism Environmental Product Guide for listing of environmentally preferred products. HDOA purchased only recycled copy paper.

**DOD:** Per mandates, environmental preferable products are specified.

**DOE:** Recycled copier paper is an option for schools to purchase. Joint effort with DBEDT for pilot testing of environmentally preferable cleaning products has resulted with testing at one school. More effort is planned to introduce more testing at more locations with eventual changes to cleaning products procurement as determined effective.

**DOH:** The DOH continues to promote this practice.

**DOT-Airports:** The Airports Division purchases their products through the State procurement system, but will consider the “Green Seal” products first.

**DOT-Harbors:** DOT-Harbors implements said procurement, uses recycled copier paper, and develops program milestones to encourage 100% implementation over a period of time.

**DOT-Highways:** The Highways Division has been working with the construction industry to incorporate the use of recycled products in pavement construction without losing pavement quality.

**DOTAX:** DOTAX coordinates with the State Procurement Office in the purchase of environmentally preferable products including recycled and recycled-content, bio-based, and other resource-efficient products and materials.

**FTZ:** All paper products to include copy and bond paper, paper towels, toilet paper, et al are purchased through the State Bid List and contain the recommended post consumer content.

**HHFDC:** As a standard practice, at all HHFDC multi-family housing projects and within the HHFDC office operations, whenever possible e-products are used for all janitorial and cleaning evolutions. In these same evolutions, the paper products consumed are generally of the 30% recycled category. As a standard practice, all of the office paper and supplies are looked at for their effort to afford sustainability of HHFDC facilities. All of the paper used is of the 30% recycled category.

**HHSC:**

- **Samuel Mahelona Memorial Hospital** - Currently has a cardboard recycling program and works with the county when recyclable or other than recyclable waste can be disposed of. A confidential paper recycling program in place.
- **O'ahu Region** - The O'ahu Region has incorporated in its procurement process the acquisition of environmentally preferable products whenever possible.
- **West Kaua'i Medical Center** - Currently has a cardboard recycling program and works with the county when recyclable or other than recyclable waste can be disposed of. A confidential paper recycling program in place.

**HPHA:** Agency is developing language for all procurements to request environmentally preferable products.

**HSPLS:** HSPLS has started procuring and utilizing environmentally preferable products where practical and applicable at all public libraries and facilities.

**HTA-CC:** The Hawai'i Convention Center continues to strive for increasing the inventory of Sustainable products in procurement. The chemical inventory of cleaning products is also evaluated regularly for new environmentally friendly products. Current examples of environmentally preferable products are napkins made from 100% recycled fibers, hot beverage cups that are paper compostable made with renewable resources, and office paper that has the stamp from the Sustainable Forestry Initiative and is acid-free.

**NELHA:** Used state bid list for resource-efficient purposes.

**PSD:** PSD utilizes the price lists issued by the State Procurement Office for its requirements for Office Supplies, Coarse Paper Products. These price lists do incorporate products that are

environmentally preferable. The procurement of environmentally preferable products is under review for various commodities not addressed in a SPO price list.

**UH:**

- **UH West O‘ahu** - Currently leasing a Xerox copier that is an ENERGY STAR® product. A television that was used for classroom instruction that was broken beyond repair was replaced with an ENERGY STAR® television.
- **UH Hilo** - Toilet paper and hand towels that are purchased meet current EPA guidelines of 40% post consumer recycled content. Plastic benches and picnic tables purchased are made from recycled plastic.
- **UH Mānoa** – The University purchases toilet paper and hand towels that meet the current EPA guidelines of 40% post consumer. Recycled content; including plastic and picnic tables made from recycled plastic.
- **Maui CC** – The Culinary Program uses biodegradable food cartons, forks, knives and spoons in its foodservice operation.
- **Honolulu CC** – pending construction of PV shade structure.
- **Kaua‘i CC** – pending incorporation of a biomass system; study and contract negotiation needed.

**Act 96 SLH 2006: Transportation Vehicles and Fuel**

(1) Comply with Title 10, Code of Federal Regulations, Part 490, Subpart C, “Mandatory State Fleet Program”, if applicable.

This section does not apply to the following agencies because they do not have a fleet: AG, B&F, DCCA, DHRD, DLIR, DLNR, DOTAX, FTZ, HCDA, HHFDC, HPHA, HSPLS, HTA-CC, NELHA

The following agencies are in compliance, with no additional comments necessary: DHHL, DOA, DOD, DOH, DOT-Airports, DOT-Harbors, DOT-Highways, HHSC

**DAGS:** Strategy: DAGS Automotive Management Division (AMD) has determined it is in compliance with federal requirement by purchasing only new alternative fuel vehicles. Vehicle purchases continue to comply with 10 CFR, Part 490, on alternative fuel E85 vehicles. Covered Fleet Vehicle purchases conducted by the State Procurement Office (SPO) continue to comply with 10 CFR, Part 490, on alternative fuel E85 vehicles and Non-Covered Fleet Act 96 Part IV, HRS section 103D-412, Energy-Efficient Vehicles. DAGS plans are to continue to update and replace ageing fleet with energy-efficient vehicles. For FY2011 and 2012, DAGS AMD has a \$475,000 ARRA grant secured by DBEDT to expend for electric vehicles. Five charging stations and two electric vehicles have been acquired.

**DBEDT:** Does not apply. DBEDT does not have a “covered fleet.”

**DHS:** DHS continues to coordinate with DAGS-Automotive Management Division (AMD) to ensure that vehicle purchases comply with the applicable requirements.

**DOE:** The DOE has organized its fleet program by complex areas and offices. Based on this organization, only the Office of School Facilities and Support Services meet the requirements to be designated as a “covered fleet.”



**PSD:** While PSD is a law enforcement entity that is exempt from Title 10, in past procurements has followed the intent of Act 96 (2006) where applicable. Examples are purchasing vehicles that are “Flex Fuel” capable – where they can run properly on either regular gas or E-85. For fiscal year ending 2011, PSD did not purchase any "new" vehicles for its facilities.

**UH:** Windward Community College recently purchased two flexible fuel sedans and one cargo van replacing older vehicles that were not as energy efficient.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

(2) Comply with all applicable state laws regarding vehicle purchases.

This section does not apply to the following agencies because they do not purchase vehicles: AG, B&F, DCCA, DHRD, FTZ, HHFDC, HPHA

This section does not apply to the following agencies because DAGS manages their vehicle purchases: HCDA, HTA-CC

The following agencies are in compliance with no additional comments necessary: DHHL, DOA, DOD, DOE, DOH, DOT-Airports, DOT-Harbors, DOT-Highways, DOTAX, HHSC, HSPLS, NELHA, PSD, UH

**DAGS:** Assessment: AMD and SPO review departmental request to purchase passenger vehicles.

Strategy: HAR Section 3-122-13, Development of specifications and HRS Section 103D-412, Energy-efficient vehicles, provides guidance to State and county purchasing agencies on the purchase and leasing of vehicles. The SPO, AMD, and DBEDT have developed guidelines for the purchase of vehicles including energy-efficient vehicles. These guidelines are available on the DBEDT website: <http://Hawaii.gov/dbedt/info/energy/efficiency/state/>

**DBEDT:** DBEDT is aware of and complies with vehicle purchasing requirements. Amendments to vehicle purchasing requirements related to efficiency are disseminated to other agencies through the Lead By Example working groups.

**DHS:** DHS continues to coordinate with AMD to ensure that vehicle purchases comply with the applicable requirements.

**DLIR:** The DLIR owns the following vehicles:

1999 Ford Windstar  
1994 Chevrolet Astrovan

The DLIR does not have immediate plans to purchase another vehicle in the near future; however, the department will adhere to the applicable state laws regarding vehicle purchases

**DLNR:** DLNR will continue to work with DBEDT in a statewide collaboration on energy efficiency, as a member of DBEDT’s Lead By Example Leadership Group. DLNR continues to

seek the advice of other state agencies through DBEDT's Lead By Example Leadership Group and will implement internal procedures as appropriate.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

- (3) Once federal and state vehicle purchase mandates have been satisfied, purchase the most fuel-efficient vehicles that meet the needs of their programs; provided that life cycle cost-benefit analysis of vehicle purchases shall include projected fuel costs.

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DOD, FTZ, HCDA, HHFDC, HPHA, HSPLS, HTA-CC, and NELHA.

The following agencies are in compliance, with no additional comments necessary: DOH, DOT-Airports, DOT-Highways, and HHSC.

**DAGS:** Assessment: The AMD and SPO review will provide opportunity to comply with the policy to procure the most fuel-efficient vehicles.

Strategy: This review will mandate agencies to be compliant with law.

**DBEDT:** DBEDT is aware of and complies with vehicle purchasing requirements and is seeking models to simplify life-cycle cost benefit analysis for purchasing purposes. EIA fuel cost projections researched by DBEDT for use in Life Cycle Cost analysis have been distributed to other agencies via the Lead by Example initiative.

**DHHL:** DHHL shall consider all aspects, such as fuel consumption, capacity, and need, in addition to price, to reach the decision on the purchase.

**DHS:** DHS continues to coordinate with AMD and SPO to ensure that vehicle purchases meet fuel efficiency requirements in relation to operational needs.

**DLIR:** Prior to purchasing a vehicle in the future, the department will insure that any vehicle purchase satisfies federal and state mandates and is the most fuel-efficient vehicle that meets the needs of our program.

**DLNR:** DLNR will continue to work with DBEDT in a statewide collaboration on energy efficiency, as a member of DBEDT's Lead By Example Leadership Group. DLNR continues to seek the advice of other state agencies through DBEDT's Lead By Example Leadership Group and will implement internal procedures as appropriate.

**DOA:** ASO reminded staff of the department's Energy and Water Conservation and Resource Efficiency Program which provides policies, guidelines and practices with the goal to minimize energy, fuel and water consumption and implement resource-efficient operations including purchasing the most fuel-efficient vehicle that meets the needs of the program once federal and state vehicle purchase mandates have been met. HDOA did not purchase any vehicles during FY11.

**DOE:** The DOE is complying with all state laws regarding vehicle purchases through our Procurement and Contracts Branch. It is anticipated fuel-efficient hybrids will be purchased when available to meet the needs of their programs.

**DOT-Harbors:** Current budget constraints mean that replacement of older, less fuel-efficient cars is being postponed.

**DOTAX:** DOTAX will purchase the most fuel-efficient vehicle that meets the needs of its programs and will include a life cycle cost-benefit analysis, including projected fuel costs, in vehicle procurements.

**PSD:** PSD awards to the lowest responsive, responsible bidder for its agencies.

**UH:** UH Mānoa initiated a fleet replacement program employing EPA grants to replace heavy vehicles with new clean diesel trucks which are bio-diesel compatible. UH Mānoa received EPA grants totaling \$340,000 to replace four of its heavy trucks in FY2011 and also initiated an electric vehicle replacement program for older ICE vehicles, replacing three ICE vehicles with EV in FY2011.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

(4) Purchase alternative fuels and ethanol blended gasoline when available.

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DOD, FTZ, HCDA, HHFDC, HPHA, HTA-CC, and NELHA.

The following agencies are in compliance, with no additional comments necessary: DOH, DOT-Airports, DOTAX, HHSC, and UH.

**DAGS:** SPO Price List No. 07-20 Gasoline Fueling and Credit Card Services for Hawai'i, Kaua'i, Maui, and O'ahu, includes the requirement to establish monthly reports from the vendors of purchases by each cardholder.

SPO Price List contract for Gasoline & Diesel Fuel, Bulk Delivery (09-16 Hawai'i, 09-17 Maui, 09-18 O'ahu, and 09-19 Kaua'i) are for purchases of ethanol-blended gasoline, E-10, and ultra low sulfur diesel fuel, by all agencies on a statewide basis. The available information will be used to determine total gasoline purchases and expenditures by each purchasing agency. In each contract, the State has the option to convert from petroleum diesel fuel to biodiesel blended fuel at one or more locations by providing ninety (90) days written notice to the Contractor. Prior to re-solicitation, review of market availability of biodiesel fuels are conducted to ensure alternative fuels are made available through the SPO Price and Vendor lists contracts.

**DBEDT:** DBEDT intends to purchase alternative fuels when available. DBEDT currently uses an electric vehicle rented from DAGS Automotive Division.

Through DBEDT's Electric Vehicle (EV) Ready Program, \$475,500 was allocated to the Department of Accounting and General Services (DAGS) Automotive Management Division to Lead By Example through the purchase of EVs for the State motor pool, and for the installation of EV charging stations at public lots and State motor pool. Currently, there are six (6) at the

DAGS motor pool at Punchbowl and one (1) at the Natural Energy Laboratory of Hawai'i Authority.

EV Charging Stations have been installed in state facilities. There is one (1) at the State Office Tower (private), two (2) at DAGS motor pool (private), one (1) in the Capitol Basement Parking Garage (public), and one (1) in the South Street garage parking lot next to Ka'ahumanu Hale First Circuit Court (public).

**DHHL:** DHHL shall continue to use gasoline from Tesoro to fuel our vehicles.

**DHS:** DHS continues to coordinate with SPO on purchasing alternative fuels from established price lists.

**DLIR:** DLIR purchases ethanol blended gasoline from DAGS Automotive.

**DLNR:** DLNR purchases fuel from vendors as selected by the State Procurement Office in compliance with the Procurement Code. This often includes gas stations that offer ethanol 10 blended gasoline. DLNR is not aware of adequate vehicles that operate on alternative fuel effectively for the type of performance needed. DLNR continues to seek the advice of other state agencies through DBEDT's Lead By Example Leadership Group and will implement internal procedures as appropriate.

**DOA:** No biodiesel fuel was purchased in FY11.

**DOE:** For light duty vehicles, only ethanol blended gasoline is currently available. For diesel fuel vehicles, biodieselfuel is being considered where practical.

**DOT-Harbors:** DOT-Harbors purchases environmentally friendly fuels when available and practical. DOT-Harbors also needs to purchase vehicles capable of using alternative fuels.

**DOT-Highways:** The Highways Division currently purchases propane as an alternative fuel.

**DOTAX:** DOTAX purchases ethanol blended gasoline through DAGS Automotive.

**HSPLS:** HSPLS Logistic Support Section vehicles are E85 compliant. Two HSPLS Automated Systems Equipment Technicians vehicles are E85 compliant.

**PSD:** PSD follows the Comptroller's Memo 2005-13 that requires the lower grade of fuel.

[Fleet use of biodiesel \(gallons purchased\) and total cost \(\\$\):](#)

The following agencies did not reply to this section: AG, B&F, DBEDT, DHHL, DHS, DOH, DOTAX, FTZ, HPHA, NELHA, and UH.

This section does not apply to the following agencies: DCCA, DHRD, DLIR, DOD, HCDA, HHFDC, and HTA-CC.

The following agencies reported that no biodiesel fuel was purchased in FY11: DLNR, DOA, DOT-Harbors, HHSC, HSPLS, and PSD.

**DAGS:** Biodiesel purchases, limited to Maui, for the period Apr 2011 to Jun 2011 (3 months) was 6,995 gallons for \$30,807.00; the average cost per gallon is \$4.40.

**DOE:** Biodiesel is not available due to state fuel pricelist. Also, limited locations for biodiesel purchasing make it very difficult to establish a purchasing program.

**DOT-Airports:** Not at this time. The Airports Division does not have a separate tank for storage.

**DOT-Highways:** The Highways Division, Maui District, voluntarily converted their diesel equipment to biodiesel in June 2011. So far, 7,700 gallons of biodiesel was purchased at a cost of \$38,503.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

#### **(5) Promote efficient operation of vehicles.**

This section does not apply to the following agencies because they do not own any vehicles: AG, B&F, DCCA, DHRD, FTZ, HHFDC, and HPHA.

The following agencies are in compliance, with no additional comments necessary: DOD, DOH, DOT-Airports, DOT-Highways, HHSC, and NELHA.

**DAGS:** Assessment: DAGS provides guidelines in the general operation of vehicles including a compressive Preventive Maintenance (PM) Schedule for its vehicles.

Strategy: DAGS Motor Pool offers PM services to all state vehicles under 8,500 GVW.

**DBEDT:** DBEDT distributes guidelines for energy-efficient vehicle operations to members of the department and to other agencies along with a mileage and fuel tracking log.

**DHHL:** Drivers are reminded to follow posted speed limit signs and practice safe driving. Recommended Driving and Vehicle Maintenance Tips are attached with each mileage log.

**DHS:** DHS continues to coordinate with AMD on the issuance of vehicle operation procedures.

**DLIR:** The DLIR vehicles are serviced by the DAGS Automotive Management Division Motor Pool on a regular basis. Both of the DLIR vehicles are in sound condition and operate at maximum efficiency.

**DLNR:** DLNR encourages maintenance and regular service of vehicles. DLNR continues to seek the advice of other state agencies through DBEDT's Lead By Example Leadership Group and will implement internal procedures as appropriate.

**DOA:** ASO reminded staff of department's Energy and Water Conservation and Resource Efficiency Program which provides policies, guidelines and practices with goal to minimize

energy, fuel and water consumption and implement resource-efficient operations including tips on efficient operation of vehicles.

**DOE:** No formal programs have been developed by the Department of Education.

**DOT-Harbors:** Trips are limited to what is required for safety and efficiency and are combined to save fuel. Vehicle trips from base yard to job sites are kept to a bare minimum by requiring job assignments to be clearly understood to ensure that all materials, tools, equipment, etc. to complete the job are on board prior to vehicles leaving the base yard.

**DOTAX:** DOTAX will promote efficient operation of vehicles through an educational campaign.

**HCDA:** HCDA encourages staff to walk to properties/appointments whenever possible.

**HSPLS:** HSPLS monitors servicing and maintenance of vehicles on an average of 3,000 miles or 3 months for preventive maintenance. O‘ahu operations currently use a service repair vendor that has begun the use of bio-based engine oils.

HSPLS Electronic Support Section vehicles are serviced regularly for general maintenance using factory recommended guidelines.

**HTA-CC:** The Hawai‘i Convention Center keeps vehicle logs of all usage for the three (3) vehicles on property. The vehicles are a passenger van, a pickup truck, and a high cube van. The Facilities department is responsible for scheduling routine maintenance of the vehicles to keep them operational to the best extent possible after 14+ years.

**PSD:** In an effort to comply with this Act, PSD has issued a department wide memorandum promoting the efficient use of vehicles.

**UH:** Windward CC, as part of the Library Learning Commons project, will designate a certain number of parking stalls as “car pool” to encourage students, faculty, and staff to ride share to campus. Honolulu, Leeward, Kapi‘olani, and Windward Community Colleges are planning to install an electric car charging station to encourage use of efficient operating vehicles.

A media specialist position was established in the division to help in the development and distribution of information on the efficient operation of vehicles, through the dissemination of brochures and web postings.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

(6) Use the most appropriate minimum octane fuel; provided that vehicles shall use 87-octane fuel unless the owner’s manual for the vehicle states otherwise or the engine experiences knocking or pinging.

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DOD, FTZ, HHFDC, and HPHA.

The following agencies are in compliance, with no additional comments necessary: DAGS, DBEDT, DLIR, DLNR, DOE, DOH, DOT-Airports, DOT-Highways, HCDA, HHSC, HSPLS, HTA-CC, NELHA, and UH.

**DBEDT:** This instruction will be distributed department-wide.

**DHHL:** Twenty-five out of DHHL's twenty-seven vehicles use 87-octane gasoline. The other two (cargo and a dump truck) on Moloka'i require diesel fuel. DHHL shall enforce this policy and confirm that all vehicles use 87-octane gasoline.

**DHS:** DHS continues the implementation of the present policy requiring the use of 87-octane fuel.

**DOA:** ASO reminded staff on department's Energy and Water Conservation and Resource Efficiency Program, which provides policies, guidelines and practices with the goal to minimize energy, fuel and water consumption and implement resource-efficient operations, including using the 87-octane fuel unless the owner's manual for the vehicle states otherwise or the engine experiences knocking or pinging.

**DOT-Harbors:** All vehicles are using 87-octane fuel unless owner's manual for the vehicle states otherwise. DOT-Harbors purchases environmentally friendly fuels when available and practical.

**DOTAX:** DOTAX uses the most appropriate minimum octane fuel, provided that vehicles shall use 87-octane fuel unless the owner's manual for the vehicle states otherwise or the engine experiences knocking and pinging.

**PSD:** PSD follows Comptroller's Memo 2005-13, which prohibits the use of mid-grade or premium gasoline unless prior approval by the Comptroller's Office is received.

### **Act 96 SLH 2006: Transportation Vehicles and Fuel**

(7) Beginning with fiscal year 2005-2006 as the baseline, collect and maintain, for the life of each vehicle acquired, the following data:

This section does not apply to the following agencies: AG, B&F, DCCA, DHRD, DOD, FTZ, HCDA, HHFDC, and HPHA.

The following agencies are working toward achieving compliance, or are in the process of creating a system to monitor this data: DOH and DLNR

The following agencies collect and maintain data on their own, and are in compliance: DAGS, DBEDT, DHS, DOA, DOTAX, HTA-CC, NELHA, and UH.

The following agencies provided a spreadsheet that contains specific data: DHHL (Appendix 4), DOE (Appendix 5), DOT-Airports (Appendix ? )DOT-Harbors (Appendix 6), DOT-Highways (Appendix ??), HHSC (Appendix), HSPLS (Appendix), and PSD (Appendix 7).

(A) Vehicle acquisition cost:

**DLIR:** 1999 Ford Windstar acquired on 1-23-01 for \$17,500.00  
1994 Chevrolet Astrovan acquired on 5-3-01 for \$5,900.00

(B) United States Environmental Protection Agency rated fuel economy:

**DLIR:** 1999 Ford Windstar: 17 mpg City and 23 mpg Highway  
1994 Chevrolet Astrovan: 17 mpg City and 22 mpg Highway

(C) Vehicle fuel configuration, such as gasoline, diesel, flex-fuel gasoline/E85, and dedicated propane:

**DLIR:** 1999 Ford Windstar – Gasoline/E85  
1994 Chevrolet Astrovan – Gasoline/E85

(D) Actual in-use vehicle mileage:

**DLIR:** FY 2006

- 1999 Ford Windstar – 2096.1 Miles
- 1994 Chevrolet Astrovan – 248.0 Miles

FY 2007

- 1999 Ford Windstar – 1616.6 Miles
- 1994 Chevrolet Astrovan – 166.3 Miles

FY 2008

- 1999 Ford Windstar – 1541.70 Miles
- 1994 Chevrolet Astrovan – 148.40 Miles

FY 2009

- 1999 Ford Windstar – 1190.2 Miles
- 1994 Chevrolet Astrovan – 504.0 Miles

FY 2010

- 1999 Ford Windstar – 2735.1 Miles
- 1994 Chevrolet Astrovan – 175.7 Miles

FY 2011

- 1999 Ford Windstar – 2288.3 Miles
- 1994 Chevrolet Astrovan – 507.9 Miles

(E) Actual in-use vehicle fuel consumption:

**DLIR:** FY 2006

- 1999 Ford Windstar – 226.7 Gallons
- 1994 Chevrolet Astrovan – 21.7 Gallons

FY 2007

- 1999 Ford Windstar – 176.4 Gallons
- 1994 Chevrolet Astrovan – 20.6 Gallons

FY 2008

- 1999 Ford Windstar – 169.00 Gallons
- 1994 Chevrolet Astrovan – 20.8 Gallons



FY 2009

- 1999 Ford Windstar – 129.00 Gallons
- 1994 Chevrolet Astrovan – 60.40 Gallons

FY 2010

- 1999 Ford Windstar – 167.9 Gallons
- 1994 Chevrolet Astrovan – 21.2 Gallons

FY 2011

- 1999 Ford Windstar – 265.5 Gallons
- 1994 Chevrolet Astrovan – 40.1 Gallons

(F) Actual in-use annual average vehicle fuel economy:

**DLIR:**

FY 2006

- 1999 Ford Windstar – 9.25 Miles Per Gallon
- 1994 Chevrolet Astrovan – 11.43 Miles Per Gallon

FY 2007

- 1999 Ford Windstar – 9.16 Miles Per Gallon
- 1994 Chevrolet Astrovan – 8.07 Miles Per Gallon

**Note:** Decrease of 3.36 miles per gallon resulted from mechanical problems with the vehicle. The mechanical problems reduced the vehicle's total miles driven in FY07 by a total of 81.7 miles (248 miles in FY06 to 166.3 in FY07), a 33 percent reduction. The inability to drive the vehicle accounts for decrease in the miles per gallon of 33 percent. The mechanical problems which prohibited the use of vehicle have been repaired by the DAGS Automotive Division.

FY 2008

- 1999 Ford Windstar – 9.12 Miles Per Gallon
- 1994 Chevrolet Astrovan – 8.87 Miles Per Gallon

FY 2009

- 1999 Ford Windstar – 9.23 Miles Per Gallon
- 1994 Chevrolet Astrovan – 8.34 Miles Per Gallon

FY 2010

- 1999 Ford Windstar – 16.29 Miles Per Gallon
- 1994 Chevrolet Astrovan – 8.29 Miles Per Gallon

FY 2011

- 1999 Ford Windstar – 8.62 Miles Per Gallon
- 1994 Chevrolet Astrovan – 12.67 Miles Per Gallon

**Act 96 SLH 2006: Transportation Vehicles and Fuel**

(8) Beginning with fiscal year 2005-2006 as the baseline with respect to each agency that operates a fleet of thirty or more vehicles, collect and maintain, in addition to the data in paragraph (7), the following:

This section does not apply to the following agencies: AG, B&F, DBEDT, DCCA, DHHL, DHRD, DHS, DLIR, DOD, DOTAX, FTZ, HCDA, HHFDC, HHSC, HPHA, HSPLS, HTA-CC, and NELHA.

The following agencies collect and maintain data on their own, and are in compliance: DAGS, DLNR, DOA, DOE, DOT-Highways, and UH.

The following agency is in the process of implementing a system to collect and maintain data: DOH.

The following agencies provided a spreadsheet that contains specific data: DOT-Airports (Appendix ), DOT-Harbors (Appendix), and PSD (Appendix).

(A) Information on the vehicles in the fleet, including vehicle year, make, model, gross vehicle weight rating, and vehicle fuel configuration:

**See above**

(B) Fleet fuel usage, by fuel:

**UH:** The fleet fuel usage is tracked in the fleet asset management program. Fleet fuel consumption for FY 2011:

87-Octane Gasoline - 55,228.3 gallons

Diesel – 81,514.3 gallons

(C) Fleet mileage:

**UH:** The fleet mileage is recorded in the fleet database. The average miles traveled by each group of fleet vehicles are as follows:

Sedans – 4313 Miles

Vans - 4272.1 Miles

Pickup Trucks - 5310.1 Miles

(D) Overall annual average fleet fuel economy and average miles per gallon of gasoline and diesel:

**UH:** The fleet annual average fleet fuel economy is tracked in the asset management program. The annual average vehicle fuel economy for FY2011 for each group of fleet vehicles is as follows:

Sedans – 20 MPG

Vans - 20.1 MPG

Pickup Trucks - 17.3 MPG

## Renewable Energy and Resource Development

All affected agencies and programs are directed to **review internal policies, rules, and practices regarding permitting requirements affecting renewable energy development**. To the extent possible, permitting policies and practices should be **streamlined to expedite implementation** of renewable energy projects. It is requested that agencies prepare a report to my office identifying the **specific steps they have taken to expedite** the approval of renewable energy projects.

(1) Energy consumption in kilowatt hours for the past year (July 1, 2010, to June 30, 2011) FY '11 (kWh consumption);

*Data were received directly from the electric utilities and are presented in Table 2.*

FY '11 (paid for kWh consumption);

*Data were received directly from the electric utilities and are presented in Table 4.*

The following agencies provided this information in addition to utility data: HHFDC (Appendix 1).

(2) Steps taken to **inventory, investigate, plan, and implement** energy reduction efforts.

The following agency did not reply to this section: HSPLS

**AG:** The department continues to issue reminders to staff to “Switch it off,” keep blinds closed, and report equipment malfunctions. AG has also instituted a practice to leave off unnecessary hallway lights. All new equipment purchases must be ENERGY STAR® or approved by Administrative Services Office if not ENERGY STAR®.

The department will participate in the iConserve campaign, asking employees to shut down computers when leaving the office for 45 minutes or more and to remove or unplug personal devices.

**B&F:** Please see items 4, 5, 6 and 7 under “Act 96 SLH 2006: Buildings and Facilities” above.

**DAGS:** DAGS-PWD has initiated Energy Saving Performance Contracting (ESPC) projects, for the majority of DAGS facilities.

DAGS-PWD, on behalf of the HSPLS started to implement retro-commissioning on all libraries statewide during FY 2010, to the extent funding is available.

DAGS-PWD, on behalf of the Department of Public Safety (PSD), has initiated an ESPC project for various PSD facilities.

Under the ongoing “DAGS Capital District, Energy Savings Performance Contracting, Phase 1 Buildings, DAGS Job No. 52-10-0599” project, DAGS-PWD also initiated the iConserve program for State employees working in the ten (10) impacted State office buildings situated in Downtown, Honolulu. The overall intent of the iConserve program is to change State employee

behavior patterns through actions that enlighten State employees about small behavior changes, such as turning off lights, closing doors, etc, which contribute to and help sustain energy savings.

**DBEDT:** DBEDT is active in inventorying major energy efficiency and renewable energy projects in the state and collecting state facility data. As of 2008, DBEDT obtained releases from the various agencies to receive their utility data direct from the utility to allow DBEDT to consolidate consumption and cost data and track agency progress. Using this data, which went back to 2005, DBEDT established a baseline year and ran analysis for each additional year.

DBEDT set up an ENERGY STAR® Portfolio Manager master account that is linked to all agency sub-accounts to compile information and maintain data for facilities across the state. ENERGY STAR® Portfolio Manager is a free online tool for comparing building performance with similar buildings nationwide and provides building managers information that helps prioritize investment.

The Strategic Industries Division in collaboration with the Research Economic Analysis Division is developing a state facilities database with the goal of including all facility specs collected during benchmarking, utility (electricity and water) consumption and cost data, demand-side management rebates, indoor environmental quality data, and info on any improvement projects.

DBEDT also monitors the development of renewable energy and energy reduction projects in the state and their impact on our Renewable Energy and Energy Efficiency Portfolio Standards (HRS §269-96, Act 155). The project database is currently under development and will be maintained by DBEDT.

DBEDT submitted a nomination for Hawai'i's Lead By Example program to the American Council for an Energy-Efficiency Economy, which recognized the program as one of four national recipients of the State Program Awards. The award reflects strong efforts among Hawai'i state agencies to quantifiably implement energy efficiency measures at state facilities.

Quarterly Rebuild Hawai'i Consortium meetings were held on November 5, 2010, January 5, 2011, and April 5, 2011, at the Hawai'i Convention Center Auditorium. More than 215 representatives of federal, state, and local government, as well as gas and electric utilities, K-12 educational facilities, University of Hawai'i, Hawai'i Pacific University, non-profits, professional organizations, and the private sector attended. The meetings focused on energy efficiency and renewable energy projects, achievements and lessons learned. The Rebuild Hawai'i Consortium is a statewide networking and information-sharing group that includes highly skilled and motivated public/private sector participants. Membership continues to grow (currently over 500) and the information and professional relations developed as a result of the networking opportunities afforded by Rebuild Hawai'i are considered very valuable to those who participate in the quarterly meetings.

**DCCA:** Assisted DAGS with a survey to determine the number of individual offices where it is practical to use desk lamps. In areas where there is adequate natural lighting, the use of desk lamps or other forms of task lighting in lieu of overhead lighting could generate electricity cost savings. Where practicable, divisions were encouraged to use desk lamps.

Continued to work with DAGS to monitor and review AC temperature data and made adjustments to air-conditioning system controls to correct areas of inefficiencies.

DCCA monitored monthly energy consumption to ensure timely actions to address issues whenever necessary.

**DHHL:** DHHL will continue to keep an inventory of department electric meters, departmental operations and construction.

**DHRD:** The department continues to encourage all employees to implement energy conservation practices such as turning off hallway and elevator lobby area lights at the end of the day; as well as turning off copier machines and computers rather than leaving the equipment on sleep mode.

DAGS implemented the following energy conservation initiatives for the Leiopapa A. Kamehameha building, which this department occupies: (a) installed window tinting to help keep the solar heat out of the building and reduce the air conditioning cooling load; and (b) installed a power management program on all computers to generate utility savings and reduce the amount of carbon dioxide emitted into the atmosphere.

**DHS:** DHS is a participating department in the State's Lead By Example program. As a part of this statewide project, DHS is developing a plan to implement energy reduction efforts.

**DLIR:** DLIR will continue to evaluate current efforts to reduce energy usage by monitoring and reminding all offices of the need to adhere to energy efficiency practices such as turning off electrical lights, printers, copier machines, and computers when not in use.

We will also continue to educate, encourage and promote energy reduction efforts to our employees via meetings and memorandums.

**DLNR:** DLNR continues to review internal policies, rules, and practices regarding permitting requirements affecting renewable energy development. To the extent possible, DLNR streamlines permitting policies and practices to expedite implementation of renewable energy projects. Three of these permitting processes are detailed below.

#### **DLNR issuance of Conservation District Use Permits**

The Office of Conservation and Coastal Lands (OCCL) oversees activities within the Conservation District. OCCL is proposing new rules state as follows: "Hydroelectric, wind generation, ocean thermal energy conversion, wave, solar, geothermal, and other renewable power generation facilities from natural resources; includes generation, conversion, transmission facilities and access roads. Renewable energy projects that are property sited and minimize impacts to natural, cultural, and recreational resources shall be expedited in the application review and decision-making process." Thus, renewable energy projects can be located within the Conservation District. Under the new proposed rules, renewable energy projects can be located within the Conservation District with approval by way of a Conservation District Use Permit. Language is also proposed that would require the Department to expedite projects that minimize impacts to natural, cultural, and recreational resources. OCCL initiated the rulemaking process in 2010 and therefore these proposed changes may take effect in the near future.

## **DLNR issuance of Incidental Take Licenses**

In order to be in compliance with state and federal endangered species laws, energy and resource development projects that impact threatened and endangered species must be issued an Incidental Take License by both DLNR and the United States Fish and Wildlife Service (USFWS). Both agencies require that project proponents complete a Habitat Conservation Plan (HCP) prior to the issuance of the take licenses. In order to minimize procedural burdens on the applicants, DLNR works cooperatively with USFWS in concurrently processing the request for take licenses. After notice in the periodic bulletin of the Office of Environmental Quality Control, a public hearing is held on the islands affected, which is, whenever possible, held jointly with USFWS. The Board of Land and Natural Resources (BLNR) may approve the federal HCP without requiring a separate version if the federal HCP satisfies all the criteria of the state endangered species statutes. All state agencies, to the extent feasible, work cooperatively to process applications for HCPs on a consolidated basis including concurrent processing of any state land use permit application that may be required. In order to further streamline the process of approving an HCP and the issuance of an Incidental Take License, the state established the Endangered Species Recovery Committee that serves as a consultant to the BLNR by reviewing all HCPs and making recommendations regarding whether they should be approved.

## **DLNR Revised Application to Lease State Lands**

For instances when Renewable Energy Producers are interested in leasing state lands, the Application Form has been revised to comply with Section 171-95 (a) (2)(3)(c), HRS. Land Division takes steps to process the request in a timely manner. Staff coordinates the Applicants' request for a lease with OCCL, DOFAW, OHA, and other government agencies. Then, staff obtains approval from the Land Board for the issuance of a direct lease.

## **Division of State Parks (SP)**

SP continues its implementation of energy efficiency and conservation strategies started in FY 2009 for park facilities that include the retrofitting and replacement of existing lighting fixtures and systems; installation of new fixtures and ENERGY STAR® appliances; repairing and replacing electrical and water systems to reduce energy and water leakage and waste; and incorporating energy efficiency measures in the new heating, ventilation and air conditioning system (HVAC) in the 'Iolani Palace State Monument, anticipated to start in 2012.

In coordination with DLNR's Engineering Division, design for solar powered park facilities such as water, sewer, lighting and energy systems have begun. Statewide facilities include the well pumps and baseyard needs at Koke'e State Park and Polihale State Park on Kaua'i; tunnel lighting in Diamond Head State Monument on O'ahu; solar panels for the rental cabins at Wai'anapanapa State Park on Maui; and solar panels for the rental cabins and facilities at Hāpuna Beach State Recreation Area and Mauna Kea State Recreation Area on Hawai'i. Electrical utility vehicles are being used in Wai'anapanapa State Park, Maui as an option to fossil fueled service vehicles and trucks.

**DOA:** The HDOA has three renewable energy projects in various stages of development. The Moloka'i and Waimea hydropower projects are in the design phase. The 2011 Legislature appropriated funds for the installation of a photovoltaic system at a livestock slaughterhouse on O'ahu program will request allotment of the funds in FY 12. Other ongoing projects include:

1. Continued to work with DAGS Central Services Division in identifying possible energy efficiency projects.
2. Continued to retrieve information electronically on gas consumption and odometer readings from DAGS Automotive Management Division, Tesoro and Hawai'i Petroleum for FY11.
3. Continued to use vehicle refueling log for program that have vehicles that refuel at places other than DAGS, Tesoro and Hawai'i Petroleum.
4. Continued to retrieve information electronically on gas consumption and odometer readings for each vehicle from DAGS Automotive Management Division, Tesoro and Hawai'i Petroleum for FY11.
5. Monitored and compiled kWh consumption data and cost for electricity for FY11.
6. Reminded staff of department's Energy and Water Conservation and Resource Efficiency Program which provides policies, guidelines and practices intended to minimize energy, fuel and water consumption and implement resource-efficient operations. Includes department's target consumption goals for electricity, fuel and environmentally preferred products.
7. Distributed DAGS memo requesting employees to conserve energy and to report any water waste from open faucets, leaky plumbing fixtures, and broken and/or inefficiently run irrigation system.
8. Developed spreadsheet to compare data in FY 2009, FY 2010, and FY 2011 on electricity kWh consumption and percentage increase/decrease from previous year and distributed to program managers for their review and information.
9. Provided guidelines for staff at each HDOA facility regarding AC hours of operation and to turn off lights and equipment when not in use.

**DOD:** Per Federal mandates: Building energy audits to be performed on 25% of buildings annually or all buildings every 4 years. FY10, energy audits performed by department staff. Currently reviewing ENERGY STAR® Portfolio Manager and utility energy service contracts (UESC) energy assessment. Projects reviewed for energy efficiency efforts: HVAC, controls, and lighting.

**DOE:** The DOE has developed an internal system that enables the comprehensive managing of all utilities – electricity, water, sewage disposal, and gas – for all schools through a central office. As of March 1, 2007, the payment for all utilities was centralized into one office. We now are able to track DOE to establish programs that monitor utility use by schools specifically identifying (schools) with higher than anticipated consumption. Additionally a Memorandum of Agreement with the University of Hawai'i Sustainable Saunders group was done at Keone'ula Elementary School and will be done at Kalani High School, to determine user comfort, day lighting designs, ENERGY STAR® assessment, waste stream analysis and a water audit. Results from this study will allow the department to identify energy savings measures which can hopefully be replicated throughout the State. Finally, the department has been working with the Federal National Research Energy Laboratory to assist in developing long range energy reduction strategies.

Immediate steps for conservation programs continue and are listed as follows:

- Continue with implementation of LEED Silver for new and major construction projects.
- Continued training for LEED New Construction and LEED for Schools as updated by USGBC.
- Continue with installation of low-flow bathroom fixtures whenever fixtures require replacement.
- All incandescent lamps will be replaced with compact fluorescent lamps (CFL).
- Continue meetings with vendors seeking new energy conserving technologies.

- Continuation with pilot (test) studies of new promising technologies.
- Establishment of a Water Conservation “Steering Committee” or “Task Force” within the Office of School Facilities and Support Services to expedite conservation activities between branches and within the DOE as a whole.
- Open discussion with the Board of Water Supply to seek innovation water conservation concepts, projects, and/or studies such as Irrigation Management Control System, plant species, drip irrigation, and captured rainwater.

Immediate steps in DOE Policy for school conservation are listed below:

**Electricity:**

- Set air conditioning so that the room temperature is 76 degrees.
- Do not turn on any air conditioning until 7:00a.m. or (if the air conditioning unit is turned on and off manually) until the room temperature reaches 74 degrees, whichever comes later, and turn off all air conditioning no later than 4:30p.m.
- Use timers to turn off 75 percent of night lights between the hours of 10:00p.m. and 6:00a.m.
- By June 15, 2009, replaced all appliances (refrigerators, microwave ovens, toasters, coffee makers, rice cookers, etc.) in classrooms and offices with ENERGY STAR®-rated appliances. Personal appliances should be limited to no more than one of each on each floor of a building. All other personal appliances were removed by December 31, 2008.
- Purchase or lease only ENERGY STAR®-rated computers, copiers, printers, and servers.
- Turn off computers, printers, and copiers at the end of the day.
- As of July 1, 2009, all schools with central chiller air conditioning have reduced their energy usage by 16% via baseline reduction. All other school will have reduced their baseline by 6%.

**Water:**

- All schools and offices shall cut back on water usage by at least 10 percent. Water lawns early in the morning or late in the afternoon or evening.
- Timers on automatic sprinklers shall be adjusted to water the lawns on Sundays, Tuesdays, and Thursdays, either before 9:00 a.m. or after 5:00 p.m.
- Manually water lawns on Mondays, Wednesdays, and Fridays, either before 9:00 a.m. or after 5:00 p.m.
- Car wash fundraisers shall be curtailed.
- Flooding water beds or shooting down Lāna‘i areas is highly discouraged.
- Develop a water usage tracking system that overlaps high water usage tracking system employed by the Board of Water Supply. This tracking system will identify slow developing leaks that can go undetected by BWS under their tracking system.

**DOH:** The DOH is aware of energy saving measures. DOH implements and initiates these measures whenever possible.

**DOT-Airports:**

- 1) The Airports Division is collecting data on the Division’s current construction projects in the design phase. The Division will investigate the facilities’ energy consumption to plan for reduction, and also plan for efficient design. The Division is implementing energy-efficient fixtures and equipment in its planned projects.
- 2) The Airports Division is investigating existing facilities for options to reduce energy use.



- 3) The Diamond Head Chiller Plant has been replaced and Oversea Chiller Plant project is under construction. The new equipment is high in energy reduction and efficiency.
- 4) Renovation of the Airport Lounge project has been awarded for our first LEED CI – Silver project.

**DOT-Harbors:** A program to ensure that inventorying, investigations, plans and implementations are effective and in compliance with Act 160 is largely accomplished through our CIP and special maintenance projects.

All energy dependent equipment is on inventory. Energy usage has been investigated. Plans are regularly evaluated and subject to continuous improvement for reducing energy usage. Implementation efforts include reducing, re-using and recycling supplies and making vehicular trips as productive as possible by combining purposes of trips.

**DOT-Highways:** The Highways Division has an inventory of equipment and a baseline of energy consumption. We have also started the replacement of our traditional traffic signal lamps with the new LED lamps, as well as a systematic replacement of older computer equipment with ENERGY STAR® compliant equipment with LCD screens and variable speed CPUs.

**DOTAX:**

- DOTAX continues to follow Energy Conservation best practices as outlined by the Director of Taxation in his memorandum dated March 1, 2006.
- DOTAX continues to monitor and control usage of after hour and weekend air conditioning.

**FTZ:** The FTZ has replaced the less efficient 300 watt incandescent bulbs in the warehouse with just eight (8), energy-efficient 40-60 watt CFL bulbs. These bulbs are only used at night for security purposes.

**HCDA:** There are no plans to expedite approval processes as already HCDA has Administrative Rules that mandate decisions be made within a set amount of time or else permits are automatically approved; however HCDA is:

- Currently requiring, as a permit condition, private developers to consult with HECO, DBEDT Energy Division, and the Board of Water Supply on ways to conserve/preserve resources; and
- Considering, as part of its Mauka Area Plan & Rules incorporation of LEED standards as a requirement of all development – public or private – in its Kaka‘ako Community Development District. Same is true at Kalaeloa.
- In June 2011, HCDA installed and made available to the public an Electric Vehicle charging station at its “Piano Lot” parking lot located at 160 Ahui Street in Kaka‘ako.
- HCDA is negotiating with several companies to lease land in Kalaeloa for the development of photovoltaic energy farms that has the potential to generate up to 20 MW of electricity. Discussions are in the preliminary stages and development is subject to major infrastructure upgrades in the Kalaeloa Community Development District.

**HHFDC:** In each of the categories below HHFDC used in-house staff and outside consultants to best determine the critical path to accomplish energy reduction projects. Not all of HHFDC’s affordable housing complexes have the same needs. Property Managers were assigned the task of

recognizing and categorizing possible energy reduction projects. Following is a list of the three (3) major energy reduction categories:

- 1.) LIGHTING: This is further subdivided into smaller common groups:
  - Exterior (street and security lighting).
  - Interior (office, hallway, restrooms and residential apartments).

Within each group HHFDC needed to look at the lighting application, location, size and number. These lists were reviewed and plans of action were derived and priorities set as to what, when and how items were to be changed.

- 2.) MAJOR MACHINERY: This category would consist of large consumers:
  - Elevators
  - Air Conditioning Plants and
  - Hot Water Heating Boiler

Using a recent Physical Needs Assessment and the help of machinery maintenance vendors we have been tracking mechanical life of major items installed within HHFDC's high-rise mixed use residential/commercial buildings.

In the past several years, the agency has replaced one HVAC system with heat recovery capabilities during a major building renovation and continued the operation of another until mechanical readings indicate the essential need for replacement or it become cost prohibitive to continue operations.

- 3.) MINOR MACHINERY: This category would consist of smaller consumers:
  - Circulating/Booster Pump and Motors
  - Ventilation Fans and Motors

At the recommendation of machinery maintenance vendors, HHFDC has been replacing motor and pump combinations. These pumps are supplying and circulating the fresh water and hot water to the appropriate spaces. The old pumps were operating constantly at 100% with pressure regulators mounted down the line. The new motor/pump combos installed are of the variable speed type, which supply water at a specified pressure on demand. This is a drastic reduction in power consumption.

**HHSC:** HHSC is looking into implementing energy audits on all of their facilities when funds are available. The energy audits will assist each facility with recommendations to reduce energy.

**HPHA:** Currently in procurement for proposals to furnish professional energy performance contracting consultant services.

**HTA-CC:** The Hawai'i Convention Center has an established Capital Improvements Program (CIP) that covers future building projects and enhancements. The CIP projects are reviewed on an ongoing basis to evaluate sustainable, renewable, or energy-efficient components whenever possible.

For example, currently in engineering design is a project to install variable frequency drives (VFDs) to a water treatment pumping system for the waterfall feature in the Lobby. This project

will reduce energy consumption, as there are not currently VFDs in place for operation of the pumps.

**NELHA:** Monitor energy usage to reduce seawater pumping costs to clients.

**PSD:** DAGS-PWD has worked with specialty consultants and vendors in the development of a data collection/data analysis methodology to investigate, plan and implement energy reduction measures. The plan is currently in use.

**UH:**

- **UH Hilo** - In working with DBEDT, two major buildings received energy use audit.
- **UH Hilo** - A campus wide sub-metering project is being completed. UH Administration will be able to read the 42 sub-meters on line to monitor the usage and generate reports for energy saving analysis.
- **UH West O‘ahu** – No new initiatives. Lights are turned off when rooms are not in use. Air conditioning and light timers are adjusted during no class periods.
- **UH Maui College** - Negotiations are taking place with an Energy Service Company to execute an Energy Service Performance Contract.
- **UH Mānoa** –Finished the initial phase of a complete campus-wide strategic energy plan which detailed a \$15 million campus-wide lighting retrofit and a \$36 million 5 MW photovoltaic alternate energy program to be implemented in FY2012.

(3) A **plan** or alternatives to reduce energy consumption in the future.

**AG:** The department is working with DAGS to have air conditioning systems evaluated and updated, if deemed necessary. AG has also worked with DAGS to reduce lighting in lesser used areas and hallways and assisted them to replace lights with energy-efficient light bulbs and expand recycling efforts.

**B&F:** The Department will continue to encourage all employees to initiate and implement energy-efficient practices (i.e. turning off office light when not in use or when leaving for the day, turning off computer terminals at the end of the day, distributing ENERGY STAR® saving tips, etc.). The Department, as well as all other departments, is working with DBEDT and DAGS in this effort to identify and implement energy reduction initiatives.

**DAGS:** PWD initiated Energy Saving Performance Contracting (ESPC) projects, for the majority of DAGS facilities.

DAGS-PWD, on behalf of the HSPLS started to implement retro-commissioning on all libraries statewide during FY 2010, to the extent funding is available.

DAGS-PWD, on behalf of the PSD, initiated an ESPC project for various PSD facilities.

Under the ongoing “DAGS Capital District, Energy Savings Performance Contracting, Phase 1 Buildings, DAGS Job No. 52-10-0599” project, DAGS-PWD also initiated the iConserve program for State employees working in the ten (10) impacted State office buildings situated in Downtown, Honolulu. The overall intent of the iConserve program is to change State employee behavior patterns through actions that enlighten State employees about small behavior changes, such as turning off lights, closing doors, etc, that contribute to and help sustain energy savings.

**DBEDT:** Act 207, SLH 2008, gives DBEDT the authority to coordinate and facilitate the permitting for renewable energy projects with capacity to generate 5MW or more or 100K (as amended in 2011) gallons of biofuel per year. DBEDT is required to create a "Permit Plan" for qualified renewable energy facilities, coordinate with all permitting agencies to address permitting hurdles, approve the required environmental review document upon compliance with Haw. Rev. Stat. 343, and approve all permits if not approved or denied by the appropriate state or county permitting agency within 12 to 18 months after acceptance of the final environmental review document. DBEDT is currently working with developers and the relevant state and county agencies to establish this process. DBEDT has assisted countless other renewable energy developers through the permitting process. DBEDT's role is as a liaison between other state agencies and the private sector.

DBEDT, with the help of private contractors, has also developed a permitting guidebook identifying all the potential permits a renewable energy developer would need for a given technology and location. On the Hawai'i Clean Energy Initiative website, DBEDT has developed an automated permit identifying tool and has made available all the necessary permit applications and provides practical information to help guide developers through the permitting process. DBEDT is also providing funding for the State of Hawai'i Department of Health (DOH) to put all DOH environmental permits online. Both online permitting tools should be available for public use in November 2011.

DBEDT has developed, in coordination with Hawai'i Community Reinvestment Corporation, a loan loss reserve program called GreenSun Hawai'i for financing energy efficiency projects, one of the first of its kind. GreenSun Hawai'i makes energy improvements for homes, multi-family projects, nonprofit organizations and businesses affordable by partnering with local banks and credit unions statewide and providing participating Lenders access to a loan loss reserve designed to absorb first losses on loans made to finance eligible energy efficiency and renewable energy system installations. As part of the Hawai'i Clean Energy Initiative, which aims to achieve 70% clean energy by 2030, GreenSun Hawai'i aims to increase the use of solar energy, decrease the state's dependence on imported fuel and lower overall energy costs throughout the islands.

**DCCA:** The department's I.T. staff is developing a power management strategy to reduce power consumption for computer systems and has embarked on a virtualization solution for server utilization. The department will also continue to work with DAGS to identify energy efficiency initiatives and encourage employees to adopt energy conservation practices wherever practicable.

**DHHL:** DHHL conducts in-house energy programs to inform all staff to reduce energy consumption using guidelines and recommendations from the educational leaflet from the US Department of Energy.

**DHRD:** The department will continue to encourage all employees to implement energy conservation practices and will work with DAGS to identify energy efficiency initiatives.

**DHS:** DHS is a participating department in the State's Lead By Example program. As a part of this statewide project, DHS is developing a plan to reduce future energy consumption.

**DLIR:** DLIR plans to do the following to reduce energy consumption:

1. Continue to reinforce and insure adherence to the Conserve Energy Initiative guidelines set forth by the Administration.
2. Continue to monitor and conduct self-audits of DLIR offices to identify and reduce energy consumers such as small appliances and electronic equipment.
3. Work with DAGS on the installation of solar electrical panels to reduce the energy cost.

**DLNR:** The 'Iolani Palace State Monument climate control project as noted in the FY 2009 report is anticipated to result in a 310,000 kWh savings amounting to over \$43,000. The project is in the process of obtaining approval and agreement with the DAGS to house the HVAC chiller plant in the State Archives Building. The system will service both the Palace and Archives Building. The Division of State Parks acknowledges DAGS implementation of performance contracting for its facilities and will coordinate to ensure that the system will not jeopardize its energy efficiency efforts. DLNR anticipates construction to start in 2011.

SP is continuing its energy reduction effort through the replacement of old and aging lighting and electrical systems and appliances statewide and incorporating conservation measures for staff and park users. Parks will look into developing solar and/or wind driven power sources that will be incorporated into power modules for park staff to recharge electrical utility vehicles and other energy needs. Funding has been appropriated for the design of these facilities. Also, with more park equipment and facilities utilizing solar power options, SP anticipates in reducing its annual energy expenditures including gas and oil through the replacement of electric utility and service equipment.

SP is considering the design and construction of a “green” State Park. The Mauna Kea State Recreation Area appears to be a likely candidate for a solar powered energy module that can power the park’s rental cabins, dining hall, barrack cabins, and water/sewer systems. The constant sunlight in this Pōhakuloa region and the vast open space provides the necessary amenities needed to develop this type of power source. This project is in the planning stages as all required permits and approvals are still needed as well as consultations.

**DOA:**

1. As funding allows, initiate lighting and window tinting operating projects and retro-commissioning CIP projects.
2. Send out reminders to employees to practice energy and water conservation measures.
3. As funding allows, replace air conditioning systems and units with energy-efficient ones.
4. As funding allows, upgrade to more efficient pumps and motors on irrigation systems.
5. As funding allows, install timers and other electronic controls on selected irrigation systems.
6. Promote car-pooling and bicycling.
7. Reduce operating hours of air conditioning system.

**DOD:** Some projects are per Command directed. Energy efficiency and reduction is a major concern. General repair and maintenance practices are reviewed for energy efficiency measures. Multiple HVAC designs are in process to replace old and inefficient systems. Energy Management Systems are being planned at several “energy hogs.” Lighting retrofits: replacing T12 with T8s, replacing HPS with CFL, MH or LED. Training schedules implemented to reduce a/c runtime.

- FY11, RTI, M&V confirmed 22% usage reduction.
- FY11, reduction: Bldg 1898 EMCS. UTES Warehouses lighting retrofit. RTI WH circulating pump. RTI Bldg 713 VAVs. Bldg 306 Voltage Regulator.

- FY11, two PV projects are in construction. RTI (EST bldg) and Bldg 1898 (Kalaheo).
- FY11, six renewable energy projects are being designed and reviewed. RTI (Bldg 714), AASF#2 (Hilo), Wahiawa Armory, Bldg 300 (Ft. Ruger), Bldg 1784 (Kalaheo), Bldg 28 (Waiawa).

**DOE:** Plans for future energy consumption reduction include both Energy Conservation Measures and Effort with Renewable Energy.

### **Energy Conservation Measures**

- **Energy Audits:** The Energy Conservation Coordinator will continue with on-site school assistance for energy audits and educational exchange.
- **“School Energy Conservation Program”:** Continue with the program that rewards schools who have reduced energy usage as compared to a baseline.
- **Facilities Development Pilot Studies:** Various types of technologies are available that may reduce energy use for DOE. However, their adaptability, suitability, etc. for use with DOE remains an element of risk management. Certain technologies compete for a desired effect however may be dramatically different in cost and application. Examples could be reflecting solar energy versus insulation, separate dehumidification versus selecting more efficient air conditioning. To date multiple technologies have been implemented by DOE that now needs follow-up study and reports to determine Best Practices for future facilities development of work – standardization.
- **Heat Abatement Testing:** Continue with on-going efforts to install and analyze various methods to reduce heat gain and increase comfort for portable classrooms with projects at Lokelani, ‘Ewa Beach and Kahuku. Eventual roll-out of proven and cost effective technologies and methods will be implemented as standard retrofit design in the future. As a proof of concept of these methods, an energy neutral portable will be completed in the fall of 2011 at ‘Ewa Elementary School. An energy neutral portable is an energy generating, self contained, heat reduced structure. In an effort to further improve on this concept, the University of Hawai‘i School of Architecture will be engaging its architectural students through its laboratory classes, to design and construct a better structure.
- **Education and Training:** More education and training will be sought from energy conservation equipment vendors. There will be continuation with LEED education for DOE employees via on-the-job and USGBC product offerings.
- **Energy Service Company (ESCO)-Utility Energy Services Contracts (UESC)-Power Purchase Agreements (PPA) Effort:** Investigative work will continue in the areas financing energy conservation equipment retrofitting with the assistance of ESCO, UESC, and PPA. Currently an ESCO project has been completed at Ma‘ili Elementary School. Additionally a RFP for a photovoltaic project for schools on Kaua‘i was posted in June 2011 and should be awarded to a vendor in the fall. The department is also engaging with utility companies on O‘ahu, Hawai‘i, and Maui to replicate what is being done on Kaua‘i.
- **DOE Operations and Maintenance Best Practices:** DOE will in the future hold internal meetings between offices and branches that will align and focus energy conservation efforts. This can include product (material and method) selection by committee based upon maintenance, performance, LEED, and cost benefits. This can be with further education and training for more efficient use of existing technology such as air conditioning and lighting controls, smart utility metering, sub-metering, etc.
- **DOE School Best Practices:** An investigation for identification of school equipment and/or operations that may best benefit energy conservation with the least amount of negative impact to school operations and functions will be reviewed. This will also include procurement and availability of energy-efficient products or products favoring LEED criteria. This can involve

school scheduling and selection of facility use or setting of temperatures for air conditioners.

**Effort with Renewable Energy**

A limited number of schools have had photovoltaic (PV) systems installed either by independent school effort and/or with electric utility support such as “Sun Power for Schools.” Washington Middle School, Kawānanakoa Middle School, Wheeler Middle School, and Konawaena Middle School, have all been recipients of small 22kw PV systems installed at their schools through a cooperative venture with the electric companies. Future program endeavors may include incorporation of windmill technology.

The Legislature, through Act 96, SLH 2006, appropriated \$5 million to the DOE for a pilot photovoltaic project. A vendor in conjunction with the Kaua‘i Independent Utility Company will be installing a photovoltaic system with a 1 to 1.5 mw of capacity through a purchase power agreement. The electricity cost will be approximately \$.19/kWh for the first year, with a 3% escalation over 20 years. A consultant has determined the photovoltaic array at each school and a Request for Proposal was posted in June 2011. The department is currently engaging in negotiations with similar arrangements with the other utility companies on the islands of O‘ahu, Hawai‘i, and Maui.

**DOH:** The DOH will be converting all lamps at its five O‘ahu Health Centers to SuperT8 lamps and changing ballasts to the electronic type. This project will bid in September 2011. All air conditioning retrofits utilize energy-efficient equipment.

**DOT-Airports:** The Airports Division will inform its employees and tenants about saving energy, educate its engineering staff regarding building green and using energy-efficient technology in order to implement whole-building design practices, and upgrade design and construction standards and guidelines according to the LEED standard.

**DOT-Harbors:** DOT-Harbors will increase awareness and training for employees on available energy conservation technology or practices and develop program milestones or metrics to encourage reduction of energy consumption.

**DOT-Highways:** All future building projects will be designed to meet LEED silver certification. All new traffic signals will use LED lamps, and all new computer equipment will be ENERGY STAR® compliant.

**DOTAX:** DAGS is currently working on energy savings measures, including air conditioning retro-commissioning, for the Ke‘elikōlani Building in which the DOTAX O‘ahu District Office is located.

**FTZ:** The FTZ is participating with DOT-Airports in an RFP for solar electricity generation for its 5 acre roof in downtown Honolulu. When installed, this 550 kW system will provide energy for the FTZ effectively reducing its electric costs to zero for the next twenty (20) years.

**HCDA:** HCDA will incorporate energy savings devices and procedures in future developments as well as retrofit where appropriate. Also, HCDA is exploring installation of photovoltaic system on CFS3, Park Caretakers and Net Shed buildings.

**HHFDC:** In an effort to expedite the purchase of renewable energy projects and sustainability project HHFDC has stepped forward in insuring that all projects submitted for approval are

reviewed and if viable are researched for implementation. Each and every suggestion is a way to lessen HHFDC's dependency on foreign oil and coal, thus lessening its overall carbon footprint.

Presently, HHFDC's only project, La`ilani Housing on the Big Island of Hawai'i, to have solar hot water heating is an example of how the agency allows the Property Management Coordinator, the Property Management Company (vendor) and the Project Managers to work together to select the supply/installation vendor through the competitive bid process. This is also the case with all ENERGY STAR® products. Competitive Pricing is used in all purchases of ranges, refrigerators, and space air conditioners.

In the event of any major and minor machinery replacement, again the path to successful repairs has been to allow the competitive bid process to begin immediately as to not disrupt the habitable living conditions of tenants.

**HHSC:** HHSC plans to use the approved ESCO list that DAGS is developing to implement energy reduction at all of their facilities.

**HPHA:** Once the above-referenced energy contracting consultant is engaged, the HPHA will receive a plan from the contractor to reduce energy consumption at our properties.

**HSPLS:** Funds permitting, HSPLS will work with DAGS to implement recommendations from the Retro-commissioning (RCx) reports, which will help reduce energy consumption. These include modifications to the air conditioning systems and controls, replacement of aging equipment, and replacement of plumbing fixtures. Additionally, HSPLS will continue to implement energy conservation measures by adjusting room temperatures and purchasing ENERGY STAR® products.

**HTA-CC:** The long-term Master Plan for the Hawai'i Convention Center's Capital Improvements Program (CIP) contains future project considerations for additional variable frequency drives, photovoltaic systems, rainwater collection, gray water collection, and thermal collection systems.

**NELHA:** An RFP for solar photovoltaics is scheduled for FY2012.

**PSD:** This is being done currently on an informal, project-by-project basis. PSD would like to have a strategic plan that can be coordinated by any major capital development within PSD; however, no funding or staffing has yet been authorized for this purpose.

**UH:**

- **UH Hilo** - UH Hilo has a policy to include PV in all new construction projects and is currently working on completing a 23 KW PV system over the Campus Center, a 30 KW PV system with the new Sciences & Technology Building and on PB 11 roof. An 88 KW PV system over the North Hawaii Education and Research Center has been completed. Also, an estimated 462 KW PV system will be in the Student Services Building project and an 8 KW PV system will be on the Hawaiian Language College.

- **UH Maui College** - Installed a 12 kW PV system on its rooftop via student interns from its Sustainable Construction Program and installed an 8 kW PV system on a rooftop of a new building along with a 1.2 kW wind turbine system.



- **UH Mānoa** – Currently, UH Mānoa, has installed or is actively installing 130 kW of PV in several systems on campus and is in the design phase to install an additional 5 MW of PV in FY2012.

### **Benchmarking Requirement**

(1) Each state department shall benchmark every existing public building that is either larger than five thousand square feet or uses more than eight thousand kilowatt-hours of electricity or energy per year and shall use the benchmark as a basis for determining the State's investment in improving the efficiency of its own building stock. Benchmarking shall be conducted using the ENERGY STAR® portfolio management or equivalent tool.

The following agencies did not reply to this section: DHHL, DLNR, DOE, FTZ, HCDA, HPHA, and NELHA.

This section does not apply to the following agencies because DAGS manages their facilities: AG, B&F, DCCA, DHRD, DHS, DLIR, and DOTAX.

**DAGS:** 19 O'ahu Facilities were analyzed. 8 facilities were certified and received an ENERGY STAR® Plaque, 1 facility's score was too low to qualify as an ENERGY STAR® Facility and 9 facilities were not eligible to be benchmarked since they did not fall into one of the ENERGY STAR® categories or had multiple buildings on one electric meter.

The ENERGY STAR® program does not allow benchmarking for campuses (having one electric meter for multiple buildings), parking structures and when a building has a large percentage used as computer rooms.

Benchmarking for Neighbor Island DAGS facilities is currently underway.

**DBEDT:** DBEDT has been active in helping other agencies comply with these requirements through the following activities:

- Arranging and promoting a number of online trainings on using the ENERGY STAR® Portfolio Manager online tool and distributing information on benchmarking to other agencies.
- Assisting other agencies to meet the benchmarking requirements of Act 155 (SLH 2009) by collecting data for input into ENERGY STAR® Portfolio Manager. This data included square footage, occupancy, number of computers, space classifications, percentage of area air-conditioned, hours of operation, and indoor environmental quality measures. To date, 172 facilities have been benchmarked and 18 buildings have received the ENERGY STAR®.
- If a benchmarked building received an ENERGY STAR® score that qualified for certification, DBEDT assisted in completing the application for certification by conducting the necessary indoor environmental quality assessments. These include lighting measurements, CO2 levels, temperature, and humidity measurements.

Setting up and managing a master state ENERGY STAR® Portfolio Manager account. Agency accounts were linked into the master account so that all benchmarked state facilities' data could

be accessed, extracted, and analyzed from a single account. The information collected through the master account is also used in the DBEDT state facility database mentioned above that includes not only Portfolio Manager data, but utility data, demand-side management information, improvement project details, and indoor environmental quality measurements.

**DOA:** Benchmarking study has not been performed due to lack of funding. Benchmarking will be performed when funding becomes available.

**DOD:** DOD is reviewing ENERGY STAR® Portfolio Management. Currently, HIARNG utilizes Utility Manager Pro, a NGB software, while some states do batch load data into Portfolio Manager. FY11, utility site accounts have been modified to reference per building usage versus prior per utility account usage.

**DOH:** The Department of Health is in the process of addressing this.

**DOT-Airports:** The Airports Division has plans to benchmark the major airport terminal buildings. The project is in its planning phase and will inventory the existing facilities energy usage and conditions according to ENERGY STAR® portfolio.

**DOT-Harbors:** Harbors Division will be addressing this benchmarking through (1) staff training for ENERGY STAR® portfolio management or its equivalent; and, (2) implementation through identification and benchmarking its affected buildings.

**DOT-Highways:** One building (Ali‘iaimoku Building) owned by the Highways Division applies to Act 155, SLH 2009, and it was assessed in 2010.

**HHFDC:** HHFDC used the FY2008 as its benchmarking year. At that time between July 2007 and June 2008 a complete accounting of all electricity consumed was accounted for in both kWh of usage and dollars paid for the purchase. This accounting was accomplished by transcribing the actual figures from the monthly electric bills submitted for reimbursement. In the coming year it is planned that water and natural gas consumptions over the past years will be collected, graphed and monitored the same as electrical consumption has been.

**HHSC:** HHSC has not yet benchmarked any of their buildings. HHSC will attempt to begin the benchmarking in this next fiscal year.

**HSPLS:** HSPLS initiated the benchmarking of those libraries meeting these criteria with the retro-commissioning projects in FY 2010. See Act 96, (4). Required benchmarking using the ENERGY STAR® portfolio management tool should be completed by the end of FY 2011.

**PSD:** This is being done at Halawa and O‘ahu Community Correctional Center under a Guaranteed Energy Savings Agreement and will be models for other facilities.

**UH:** UH Mānoa completed a full benchmarking of all required campus buildings using the ENERGY STAR® portfolio in FY2011.

**Oahu Vehicles**

License Plate	Model	Vehicle Description	Serial Number	Model Year	Acquisition Cost	Mileage	As of Date	gallons per 100 miles (fuel economy)	average	actual fuel consum. (gal)	fuel
1 SH7297	Chevy	Van passenger - astro	2GNEG25H8N4132080	1992	\$17,053.04	187,387	9/26/2011	6.667/5	5.84	10943.40	gasoline87
2 SH9412	Chevy	Corsica	1G1L055MISY264061	1995	\$5,900.00	80,662	9/23/2011	4.762/3.448	4.11	3315.21	gasoline87
3 SH9110	Ford	Ranger	1FTCR10U2NUJDO6502	1992	\$4,500.00		8/19/2009	5.882/4.762	5.32	0.00	gasoline87
4 SHB577	Ford	Explorer 4x4 4WD 4door	1FMZU62K75ZA32343	2005	\$24,460.42	78,750	9/26/2011	7.143/5	6.07	4780.13	gasoline87
5 SHB268	Chevy	Tahoe	3GNEK18RXVG164830	1997	\$7,500.00	94,107	9/23/2011	7.692/5.882	6.79	6389.87	gasoline87
6 SHD 358	Dodge	Caravan	1B4GP25301B158589	2001	\$4,500.00	70,098	9/23/2011	5.556/4.167	4.86	3406.76	gasoline87
7 SHD 359	Dodge	Stratus	1B3EL36104N341974	2004	\$7,200	60,170	9/23/2011	4.545/3.333	3.94	2370.70	gasoline87
8 SHD 319	Ford	E-350 12psgr	1FBNE31L88DA59307	2008	\$27,996.23	41,302	9/23/2011	no fuel rating available on vehicle			gasoline87

**Maui Vehicles**

License Plate	Model	Vehicle Description	Serial No.	Model Year	Acquisition Cost	Mileage	As of date	gallons per 100 miles (fuel economy)	average	actual fuel consum. (gal)	fuel
1 SH8652	Jeep	Cherokee SUV 4-door	1J4FJ28S3VL578912	1997	\$23,812.35	77,705	9/23/2011	6.667/5	5.84	4,538	gasoline 87

**Kauai Vehicles**

License Plate	Model	Vehicle Description	Serial Number	Model Year	Acquisition Cost	Mileage	As of Date	gallons per 100 miles (fuel economy)	average	fuel consum. (gal)	fuel
1 SH9218	Ford	Ford MPVH Explorer 4x4	1FMZU34X9XZA90464	1999	\$24,943.59	41,238	9/26/2011	6.667/5.263	5.97	2461.91	gasoline-87

**Molokai Vehicles**

License Plate	Model	Description	Serial No.	Model Year	Acquisition Cost	Mileage	As of Date	gallons per 100 miles (fuel economy)	average	fuel consum. (gal)	fuel

1	SH8310	Ford	Explorer 4x4 4WD	1FMDU34X8SUC34215	1995	\$24,424.04	115,446	9/23/2011	6.667/5.263	5.97	6892.1	gasoline
2	SH8369	Chevy	Cargo truck 2dr	1GCGD34J4EF343955	1984	\$1,600.00			n/a		0.0	diesel
3	SH8558	GMC	GMC dump truck	1GDP7H1J0VJ501905	1997	\$55,434.00	30,912	9/23/2011	n/a		0.0	diesel
4	SHA305	Chevy	Silverado 4x4	1GBHK24U52E113017	2002	\$32,490.00	128,003	9/23/2011	7.143/5.882	6.52	8345.8	gasoline
5	SHA907	Ford	Explorer 4x4 4WD	1FMZU72K24ZA03031	2004	\$26,051.43	75,254	9/23/2011	5.263/5	5.13	3860.5	gasoline
6	SHC230	Ford	Ford pickup F250	IFTNF21566EC86474	2006	\$24,355.97	47,019	9/23/2011	6.667/5	5.84	2745.9	gasoline
7	SHD719	Chevy	Pick up Truck S-10	1GCCS145718206292	2001	\$4,500.00	39,974	9/23/2011	5.26/4	4.63	1850.8	gasoline
8	SHD720	Chevy	Pick up Truck S-10	1GCCS145118204862	2001	\$4,500.00	56,193	9/23/2011	5.26/4	4.63	2601.7	gasoline

**West Hawaii Vehicles**

	License Plate	Model	Vehicle Description	Serial No.	Model Year	Acquisition Cost	Mileage	As of Date	gallons per 100 miles (fuel economy)	average	fuel consum. (gal)	fuel
1	SHC612	Ford	Escape	IFMCU93167KA15624	2007	\$24,999.95	17,624	9/26/2011	7.143/5.556	6.35	1119.124	gasoline
2	SH9064	Chevy	4x4 pickup truck	1GCGK24R9WE252855	1998	\$25,088.95	116,546	9/26/2011	6.667/5	5.84	6806.2864	gasoline
3	SH9054	GMC	Dump truck auto car	1WBUCJF8GH	1986	\$13,166.04	70,619	9/26/2011	6.667/5	5.84	4124.1496	gasoline
4	SHB591	Chrysler	1500 Quad cab pickup	1D7HU18N45J516396	2005	\$26,568.59	130,355	9/26/2011	7.143/5.556	6.35	8277.5425	gasoline
5	SH8514	Chevy	Flatbed truck	1GBHK34J4VF008123	1997	\$30,449.95	56,454	9/26/2011			0	gasoline
6	SH847	SnowBr	Trailer	2SWUW11456260072	2005		no mileage		n/a			gasoline

**East Hawaii Vehicles**

	License Plate	Model	Description	Serial No.	Model Year	Acquisition Cost	Mileage	As of Date	gallons per 100 miles (fuel economy)	average	fuel cons. (gal)	Fuel
1	SHA154	Mercury	Mountaineer	4M2ZU76E11UJ09823	2002	\$24,999.01	99,493	9/26/2011	6.667/5.263	5.97	5939.7321	gasoline -87
2	SHB897	Toyota	Tacoma 4x4 v6	5TEUU42N55Z122690	2005	\$24,778.06	42,523	9/26/2011	5.882/4.762	5.32	2262.2236	gasoline -87
3	SH 337	Dodge	Ram 1500	1D7HU18218J178398	2008	\$31,381.05	82,267	9/26/2011	7.692/5.882	6.79	5585.9293	gasoline -87

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-Use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						EPA City Fuel Econ	Acq. Cost							
<b>Fuel Type: DIESEL</b>														
FORD	PICKUP	1995	SHA547	1FTEF15Y7S1LB50326	6250			DIESEL	212	0.1	2120.0	0	0	0.0
PTRB	FLATBED	2003	SHA653	1NPZH27X73D714835	14908			DIESEL	4243	556.3	7.6	1296	202.36	6.4
FORD	PICKUP	2003	SHA899	1FTNF20P13ED82432	XXXX			DIESEL	585.1	47.7	12.3	0	0	0.0
FORD	PICKUP	2003	SHA900	1FTNF20PX3ED82431	XXXX			DIESEL	1756	150.3	11.7	0	0	0.0
FORD	PICKUP	2003	SHA901	1FTNF20D33ED82433	5556			DIESEL	3831	368.55	10.4	1414	208.85	6.8
FORD	PICKUP	2005	SHB436	1FTSF20P85EA36576	9400			DIESEL	1319	55.4	23.8	0	0	0.0
FORD	PICKUP	2005	SHB437	1FTSF20PX5EA36577	9400			DIESEL	1215	118.67	10.2	0	0	0.0
FORD	PICKUP	2005	SHB438	1FTSF20P15EA36578	9400			DIESEL	2698	211.85	12.7	0	0	0.0
FORD	PICKUP	2005	SHB439	1FTSF20P35EA36579	9400			DIESEL	1571	89.07	17.6	0	0	0.0
FORD	PICKUP	2005	SHB440	1FTSF20PX5EA36580	9400			DIESEL	552	40.09	13.8	0	0	0.0
FORD	PICKUP	2005	SHB441	1FTWF32P65EA36581	9400			DIESEL	2761	189.96	14.5	0	0	0.0
THOMAS	BUS	2006	SHB748	1T7YT4A2061270174	XXXX			DIESEL	1200	233.9	5.1	1200	233.9	5.1
THOMAS	BUS	2006	SHB749	1T7YT4A2561270171	XXXX			DIESEL	2139	84224.64	0.0	2139	84224.64	0.0
THOMAS	BUS	2006	SHB751	1T7YT4A2261270175	XXXX			DIESEL	1086	208.1	5.2	1086	208.1	5.2
THOMAS	BUS	2006	SHB752	1T7YT4A2661270177	XXXX			DIESEL	1319	133.44	9.9	1319	133.44	9.9
THOMAS	BUS	2006	SHB753	1T7YT4A2461270176	XXXX			DIESEL	3296	433.85	7.6	3296	433.85	7.6
THOMAS	BUS	2006	SHB754	1T7YT4A2861270178	XXXX			DIESEL	1532	169.94	9.0	1532	169.94	9.0
THOMAS	BUS	2006	SHB761	1T7YT4A2X61270179	XXXX			DIESEL	2182	378.27	5.8	2182	378.27	5.8
FORD	PICKUP	2006	SHC196	1FTSF20P96EB12579	9400			DIESEL	1419	135.39	10.5	0	0	0.0
FORD	F-250	2006	SHC197	1FTSF20P56EB12580	9400			DIESEL	4380	395.14	11.1	0	0	0.0
FORD	PICKUP	2006	SHC198	1FTSF20P76EB12581	9400			DIESEL	637	68.15	9.3	0	0	0.0
FORD	FLATBED	2006	SHC344	1FDWF36P76EB24319	13000			DIESEL	4909	387.02	12.7	0	0	0.0
DODGE	UTILITY	1999	SHC451	3B6KC26Z3XM580714	8800			DIESEL	42	71.73	0.6	42	71.73	0.6
FORD	UTILITY	2008	SHC719	1FDSX20R78EA28953	8570			DIESEL	8061	627.02	12.9	0	0	0.0
FORD	UTILITY	2008	SHC741	1FDSX20R98EA28954	9800			DIESEL	41878	3359.6	12.5	11585	984.25	11.8
FORD	UTILITY	2007	SHC749	1FDSX20R38EA28951	XXXX			DIESEL	4358	324.1	13.4	0	0	0.0
FORD	UTILITY	2007	SHC762	1FDWX36R28EA24355	13000			DIESEL	19770	1854.91	10.7	5079	502.1	10.1
CHEV	PICKUP	2007	SHD163	1PDXF46R98EA09249	12460			DIESEL	7897	1046.73	7.5	2424	323.15	7.5
DODGE	UTILITY	2001	SHD579	386KC25Z51M555191	8800			DIESEL	158	27.79	5.7	158	27.79	5.7
PTRB	XXXX	2009	SHD701	2NPRH8X79M787259	16000			DIESEL	9934	1050.32	9.5	7529	759.83	9.9
CHEV	PICKUP	2009	SHD705	1GCHC44649E109397	XXXX			DIESEL	3346	267.29	12.5	0	0	0.0

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel	Econ	Fuel							
<b>Fuel Type: DIESEL</b>																
CHEV	PICKUP	2008	SHD706	1GCHC44689E107961	6100					DIESEL	343	25.71	13.3	0	0	0.0
CHEV	PICKUP	2009	SHD707	1GCHK73649F103700	9900			39215		DIESEL	9420	758.84	12.4	3969	368.51	10.8
FORD	UTILITY	2009	SHD789	1FDSF30R29EA00827	7440			0		DIESEL	8132	737.86	11.0	2255	227.61	9.9
FORD	UTILITY	2009	SHD790	1FDSF30R49EA00828	10000			0		DIESEL	11383	961.43	11.8	4716	411.13	11.5
FORD	UTILITY	2009	SHD791	1FDSF30R69EA00829	7300			0		DIESEL	11851	878.17	13.5	5124	402.14	12.7
FORD	UTILITY	2009	SHD792	1FDSF30R29EA00830	10000			0		DIESEL	17606	1295.16	13.6	7806	560.88	13.9
FORD	FLATBED	2008	SHD804	1FDWF36R58EE58062	XXXX			41632.96		DIESEL	6350	586.36	10.8	1808	183.77	9.8
FORD	F-350	2008	SHD806	1FDWF36R08EE56154	XXXX			14632.96		DIESEL	6018	574.59	10.5	3584	350.38	10.2
FORD	UTILITY	2002	SHD961	1FTWF32F32EA37190	11000			0		DIESEL	718	16.82	42.7	718	16.82	42.7
PTRB	XXXX	2009	SHE132	2NPLHM6X89M787192	XXXX			0		DIESEL	16338	2219.11	7.4	15568	2109.37	7.4
INTL	4400 DUMP	2011	SHE475	1HTMKAAAL2BH390035	26000			111452.62		DIESEL	525	88.37	5.9	525	88.37	5.9
<b>Fuel Type: GAS</b>																
GMC	S14Z	1989	SH4107	1GT6CS14Z0K8528101	4900			0		GAS	492	24.7	19.9	0	0	0.0
CHEV	UTILITY	1991	SH4140	1GBGC24K2LE229689	6000			0		GAS	13251	1161.52	11.4	4930	465.01	10.6
CHEV	PICKUP	1990	SH4142	1GBGC24K4LE229709	8600			0		GAS	19380	1623.71	11.9	5776	572.98	10.1
GMC	PICKUP	1986	SH4153	1GTDC14HXGJ525747	5200			0		GAS	1374	161.4	8.5	272	20.3	13.4
DODGE	STKE	1991	SH4207	1B6ME3656MS327606	10000			20268.46		GAS	6187	666.3	9.3	0	0	0.0
FORD	UTILITY	1988	SH4219	1FDJF37G1JKA14207	8800			0		GAS	6898	1532.66	4.5	2404	580.91	4.1
CHEV	UTILITY	1991	SH4222	1GBGR33K4MF300683	9000			0		GAS	3999	432.35	9.2	0	0	0.0
CHEV	PICKUP	1990	SH4224	1GBGC24K3LE229460	8600			0		GAS	860	77.37	11.1	0	0	0.0
CHEV	UTILITY	1992	SH4229	1GBGC24KXNE196864	7200			0		GAS	8106	719.1	11.3	1540	81.5	18.9
CHEV	UTILITY	1992	SH4230	1GBGC24K2NE196907	8600			0		GAS	9081	826.08	11.0	2881	250.33	11.5
CHEV	PICKUP	1993	SH5946	1GCFC24K6PE196757	7200			0		GAS	6164	561.66	11.0	2993	253.16	11.8
CHEV	PICKUP	1993	SH5947	1GCFC24K1PE197377	7200			0		GAS	10759	975.33	11.0	5588	584.69	9.6
CHEV	CHEYENNE	1993	SH5948	1GCFC24K2PE196450	7200			0		GAS	4609	430.18	10.7	3073	287.83	10.7
GMC	PICKUP	1994	SH6968	1GCDC14H3RZ207229	XXXX			0		GAS	1087	94.17	11.5	0	0	0.0
CHEV	PICKUP	1994	SH6976	1GSGC24K9RE237292	7200			0		GAS	2512	188.9	13.3	0	0	0.0
CHEV	VAN	1994	SH7033	1GBGP32K9R3304874	XXXX			0		GAS	2912	564.58	5.2	1905	324.32	5.9
CHEV	VAN	1994	SH7097	1GBGP32K7R3304775	XXXX			0		GAS	2120	214.41	9.9	1445	142.49	10.1
CHEV	VAN	1994	SH7098	1GBGP32K7R3305333	XXXX			0		GAS	1996	245.79	8.1	1587	186	8.5
CHEV	VAN	1994	SH7099	1GBGP32KXR3305399	XXXX			0		GAS	4034	418.12	9.6	1571	152.47	10.3

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		Acq. Cost	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						EPA Hwy Fuel Econ	EPA City Fuel Econ								
<b>Fuel Type: GAS</b>															
CHEV	VAN	1994	SH7100	1GBGP32K0R3305427	XXXX			0	GAS	4284	513.75	8.3	1787	238	7.5
CHEV	VAN	1994	SH7101	1GBGP32K9R3305488	XXXX			0	GAS	5198	627.9	8.3	3034	295.61	10.3
CHEV	VAN	1994	SH7103	1GBGP32K7R3304842	XXXX			0	GAS	4351	651.21	6.7	2130	293.91	7.2
CHEV	VAN	1994	SH7104	1GBGP32K3R3305521	XXXX			0	GAS	2702	408.3	6.6	1551	178.33	8.7
CHEV	VAN	1994	SH7106	1GBGP32K4R3304927	XXXX			0	GAS	101	323.95	0.3	60	148.3	0.4
CHEV	PICKUP	1992	SH7663	1GFC24H3NE113402	7200			0	GAS	1291	67.16	19.2	0	0	0.0
CHEV	FLATBED	2000	SH7741	1GBJC34RZYF475443	7200			0	GAS	4628	340.98	13.6	0	0	0.0
CHEV	UTILITY	1993	SH7750	1GFC24H2PZ139484	7200			0	GAS	32985	2791.75	11.8	5885	524.71	11.2
CHEV	SIERRA	1992	SH7759	1GFC24KXNE209619	7200			0	GAS	8850	694.05	12.8	3856	304.1	12.7
CHEV	PICKUP	1992	SH7760	1GFC24K4NE212144	7200			0	GAS	7520	782.93	9.6	2071	185.15	11.2
CHEV	PICKUP	1991	SH7762	1GFC24H6MZ120707	7200			0	GAS	8694	651.57	13.3	3580	302.38	11.8
CHEV	PICKUP	1995	SH7763	1GFC24HXMZ120709	4340			0	GAS	2370	207.54	11.4	976	77.14	12.7
CHEV	PICKUP	1991	SH7764	1GFC24H3MZ154880	7200			0	GAS	10760	959.48	11.2	3945	304.5	13.0
CHEV	PICKUP	1991	SH7765	1GFC24H3MZ153499	7200			0	GAS	2123	153.15	13.9	1183	63	18.8
CHEV	VAN	1981	SH7806	1GCFP22M9B3311297	XXXX			0	GAS	1041	349.94	3.0	590	208.69	2.8
GMC	VAN	1989	SH7808	1GTFP22K1K3500637	XXXX			0	GAS	1861	344.68	5.4	1041	224.77	4.6
GMC	VAN	1989	SH7809	1GTFP22K5K3500561	XXXX			0	GAS	1293	580.04	2.2	744	370.55	2.0
CHEV	VAN	1989	SH7810	1GCHP32KXK3313315	XXXX			0	GAS	5131	640.51	8.0	3404	389.59	8.7
CHEV	VAN	1989	SH7811	1GCHP32K2K3313213	XXXX			0	GAS	2428	487.5	5.0	1731	262.22	6.6
CHEV	VAN	1990	SH7812	1GCGP32K0L3303812	XXXX			0	GAS	661	167.71	3.9	0	0	0.0
CHEV	VAN	1984	SH7842	1GCFP22M2E3338930	XXXX			0	GAS	447	51.51	8.7	84	30.51	2.8
CHEV	VAN	1990	SH7844	1GCGP32K5L3304065	XXXX			0	GAS	4078	504.72	8.1	1896	200.7	9.4
CHEV	VAN	1990	SH7845	1GCGP32K9L3304456	XXXX			0	GAS	2173	413.16	5.3	779	197.87	3.9
CHEV	VAN	1984	SH7879	1GCFP22MXE3338934	XXXX			0	GAS	4103	405.17	10.1	3014	282.06	10.7
CHEV	VAN	1989	SH7882	1GCHP32K3K3313124	XXXX			0	GAS	1116	114.9	9.7	199	49.9	4.0
FORD	VAN	1982	SH7894	1FCHE30E1CHA77712	XXXX			0	GAS	2561	349.55	7.3	1200	159.07	7.5
FORD	Aerostar	1988	SH7896	1FTCA14U5JZB68145	4720			0	GAS	2252	126.11	17.9	0	0	0.0
FORD	VAN	1982	SH8012	1FCHE30E8CHA77710	XXXX			0	GAS	2203	158.93	13.9	1659	114.01	14.6
CHEV	Prizm	1995	SH8077	1Y1SK5265SZ101563	2500			0	GAS	1627	68.56	23.7	0	0	0.0
CHEV	VAN	1989	SH8125	1GCHP32K9K3313371	XXXX			0	GAS	1372	220.7	6.2	907	132.6	6.8
CHEV	PICKUP	1995	SH8157	1GFC24H1SE282555	4340			0	GAS	9245	746.03	12.4	5623	448.01	12.6

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						EPA City Fuel Econ	Acq. Cost							
<b>Fuel Type: GAS</b>														
CHEV	PICKUP	1995	SH8158	1GFCF24H8SE283332	7200			GAS	9329	772.27	12.1	4315	454.31	9.5
CHEV	PICKUP	1995	SH8159	1GFCF24H4SE284641	7200			GAS	2636	171.26	15.4	610	58.44	10.4
CHEV	VAN	1990	SH8198	1GCGP32K0L3303910	XXXX			GAS	559	76.3	7.3	438	67.3	6.5
CHEV	PICKUP	1996	SH8289	1GFCF24MXT190844	7200			GAS	8960	817.18	11.0	4004	360.1	11.1
CHEV	PICKUP	1996	SH8290	1GFCF24M3TE189888	7200			GAS	1407	81.6	17.2	0	0	0.0
CHEV	PICKUP	1996	SH8291	1GFCF24M8TE192804	7200			GAS	7981	677.02	11.8	3210	292.11	11.0
CHEV	PICKUP	1996	SH8292	1GFCF24M9TE189538	7200			GAS	5766	401.66	14.4	3242	267.36	12.1
CHEV	PICKUP	1996	SH8465	1GFCF24M3VE125997	7200		18749	GAS	3164	317.05	10.0	575	56.97	10.1
CHEV	VAN	1996	SH8512	1GBH32R5V3300476	XXXX			GAS	2577	327.67	7.9	1812	232.36	7.8
CHEV	VAN	1997	SH8566	1GBHP32R6V3300552	XXXX			GAS	1505	255	5.9	811	144	5.6
CHEV	SEDAN	1993	SH8667	1G1BL537XPR133210	5258			GAS	4072	383.4	10.6	0	0	0.0
CHEV	PICKUP	1998	SH8778	1GFCF24M5WZ127387	7200		19585	GAS	11287	1030.88	10.9	4963	486.72	10.2
CHEV	PICKUP	1998	SH8830	1GCGK24R8WZ157129	8600		24840	GAS	1495	158.1	9.5	0	0	0.0
CHEV	PICKUP	1998	SH8864	1GBHC34R3WF015798	7200			GAS	5315	422.22	12.6	1746	132.82	13.1
CHEV	UTILITY	1991	SH8870	1GFCF24H1MZ162749	7200			GAS	21938	1626.07	13.5	4578	292.27	15.7
CHEV	UTILITY	1990	SH8872	1GFCF24HOLZ193019	7200			GAS	1269	55.86	22.7	1269	55.86	22.7
HYUN	Elantra	1998	SH8964	KMHJF24M5WU693530	2830			GAS	1115	23.87	46.7	0	0	0.0
CHEV	UTILITY	1991	SH9042	1GFCF24H6MZ163394	8600			GAS	13481	1163.37	11.6	858	83.36	10.3
GMC	STKE	1991	SH9069	1GDHC34K1ME5532840	10000			GAS	11185	1225.93	9.1	3942	455.62	8.7
CHEV	UTILITY	1999	SH9301	1GBHC34FOX014518	10000			GAS	5697	572.87	9.9	2559	245.17	10.4
CHEV	PICKUP	1999	SH9458	1GCGC24R5XR716263	7200			GAS	5072	316.62	16.0	1716	138.04	12.4
CHEV	Cavalier	2000	SH9525	3G1JC5240YS117423	2700			GAS	1081	48.89	22.1	0	0	0.0
CHEV	Cavalier	2000	SH9526	3G1JC5244YS118123	2700			GAS	6354	302.08	21.0	0	0	0.0
CHEV	Cavalier	2000	SH9530	3G1JC5249YS117422	2700			GAS	3023	120.06	25.2	258	11.64	22.2
CHEV	Cavalier	2000	SH9531	3G1JC5240YS118491	2700			GAS	3002	142.51	21.1	0	0	0.0
CHEV	Cavalier	2000	SH9535	3G1JC5249YS118117	2700		14063.94	GAS	8871	366.75	24.2	1887	81.59	23.1
CHEV	PICKUP	1994	SH9769	1GCDCL42ZRZ36018	5600			GAS	1511	92.2	16.4	0	0	0.0
CHEV	UTILITY	1993	SH9770	1GFCF24H3PZ139347	5060			GAS	30780	2796.2	11.0	8361	704.6	11.9
CHEV	PICKUP	1994	SH9771	1GFCF24Z5RZ245617	7200		8000	GAS	305	24.15	12.6	0	0	0.0
FORD	FLATBED	1992	SH9779	2FDLF47G5NCA63497	15000			GAS	706	67	10.5	0	0	0.0
CHEV	UTILITY	1994	SH9841	1GFCF24H1RZ266816	7200			GAS	16787	1490.52	11.3	4966	435.24	11.4

Appendix 2: Department of Education Vehicle Data



# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ	EPA City Fuel Econ	Acq. Cost	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
<b>Fuel Type: GAS</b>															
DODGE	DAKOTA	1996	SH9842	1B7HL26X2T5682625	6150			0	GAS	11512	756.5	15.2	2450	165.7	14.8
FORD	PICKUP	1997	SH9843	1FTDF172XVKD55847	6000			0	GAS	19024	1606.9	11.8	2481	207.6	12.0
CHEV	S-10	1994	SH9921	1GCCS14Z9R8226557	5300			0	GAS	32116	2089.3	15.4	4336	249.3	17.4
CHEV	S-10	1994	SH9922	1GCCS19Z0R8226181	5300			0	GAS	18142	1177.7	15.4	4177	263.3	15.9
CHEV	PICKUP	1994	SH9923	1GCDC14Z9RZ223993	5600			0	GAS	3635	265.3	13.7	0	0	0.0
CHEV	PICKUP	1994	SH9928	1GCEC14Z2RZ267791	6000			0	GAS	11255	749.01	15.0	546	25	21.8
CHEV	PICKUP	1994	SHA120	1GCCS14Z9R8225523	5300			0	GAS	7182	375.1	19.1	2713	156.1	17.4
CHEV	PICKUP	1994	SHA121	1GCF24ZXRZ245435	7200	22	16	0	GAS	23285	1688.66	13.8	7215	529.9	13.6
FORD	Taurus	1997	SHA138	1FALP224VG223165	4722			0	GAS	5498	266.4	20.6	1199	55	21.8
FORD	Taurus	1997	SHA153	1FALP5220VG223163	4722			0	GAS	12665	550.1	23.0	5612	250.8	22.4
FORD	VAN	2001	SHA163	1FTNS24L81HB36606	XXXX			0	GAS	4299	323.19	13.3	2198	171.24	12.8
FORD	VAN	2001	SHA164	1TFTNS24L61HB36605	XXXX			0	GAS	4236	301.13	14.1	3448	202.89	17.0
FORD	VAN	2001	SHA165	1FTNS24L41HB36599	XXXX			0	GAS	4331	286.87	15.1	0	0	0.0
FORD	VAN	2001	SHA166	1FTNS24L7AHB36600	XXXX			0	GAS	3941	323.22	12.2	1589	182.47	8.7
FORD	VAN	2001	SHA167	1FTNS24L91HB36601	XXXX			0	GAS	184	37	5.0	184	37	5.0
FORD	VAN	2001	SHA168	1FTNS24L01HB36602	XXXX			0	GAS	2132	118.5	18.0	0	0	0.0
FORD	VAN	2001	SHA169	1FTNS24L21HB36603	XXXX			0	GAS	5619	351.19	16.0	1474	79	18.7
FORD	VAN	2001	SHA170	1FTNS24L41HB36604	XXXX			0	GAS	1670	136.39	12.2	1344	97.35	13.8
FORD	VAN	2001	SHA172	1FTNS24L11HB36608	XXXX			0	GAS	5234	430.79	12.1	3000	221.53	13.5
FORD	Taurus	1997	SHA174	1FALP5226VG223166	4722			0	GAS	24364	1185.2	20.6	8260	421.6	19.6
FORD	Taurus	1997	SHA175	1FALP5222VG223164	4722			0	GAS	5755	249	23.1	1347	64.3	20.9
CHEV	VAN	1994	SHA203	1GBGP32K2R3305347	XXXX			0	GAS	4336	503.94	8.6	2471	240.74	10.3
CHEV	VAN	1993	SHA220	1GCGG35KOPF340875	8600			0	GAS	22040	2181.8	10.1	4620	510	9.1
CHEV	VAN	1993	SHA221	1GFGG35K6PF240704	8600			0	GAS	22448	2001.8	11.2	4434	357.6	12.4
CHEV	PICKUP	1994	SHA222	1GBGC24K0RE260917	8600			0	GAS	25288	2339.5	10.8	5902	588.78	10.0
CHEV	UTILITY	1994	SHA229	1GBGC24K3RE261673	8600			0	GAS	20509	1825.09	11.2	3986	377.59	10.6
CHEV	UTILITY	2001	SHA249	1GCF24H8PZ137190	7200			0	GAS	20051	1744.87	11.5	3249	270.53	12.0
CHEV	S-10	1994	SHA284	1GCCS1423R8226201	4900			0	GAS	959	45.37	21.1	0	0	0.0
CHEV	VAN	1993	SHA297	1GCGG35KOPF339354	8600			0	GAS	8441	786.83	10.7	0	0	0.0
CHEV	VAN	1994	SHA321	1GBGP32KXR3305449	XXXX			0	GAS	5048	808.58	6.2	2160	389.72	5.5
TOYOTA	Corolla	2001	SHA328	1NXBR12E81Z493686	2430			0	GAS	6952	327.62	21.2	3203	142.18	22.5

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel	Econ	Fuel							
<b>Fuel Type: GAS</b>																
FORD	Taurus	2000	SHA329	1FAPP5326YA142204	3300					GAS	3479	145.27	23.9	1362	38.8	35.1
CHEV	UTILITY	1994	SHA333	1GBHC34K2RE313546	8800					GAS	25584	2604.1	9.8	5936	642.72	9.2
CHEV	UTILITY	1994	SHA337	1GBHC34K5RE176621	10000					GAS	26016	2939.05	8.9	4201	497.9	8.4
CHEV	UTILITY	1994	SHA338	1GBGC24K6RE302619	8600					GAS	12115	1215.11	10.0	3244	347.78	9.3
CHEV	UTILITY	1994	SHA339	1GBHC34K3RE176973	10000					GAS	23674	2408.7	9.8	4785	424.6	11.3
CHEV	UTILITY	1994	SHA340	1GCFC24H6RZ267679	7200					GAS	19902	1590.09	12.5	6707	570.93	11.7
CHEV	STKE	1995	SHA342	1GBHC34K5SE239285	10000					GAS	1166	42.7	27.3	0	0	0.0
CHEV	PICKUP	1994	SHA343	1GBHC34K8RE174698	7200					GAS	2120	184.79	11.5	0	0	0.0
CHEV	UTILITY	1994	SHA344	1GCFC24HRZ267583	7200					GAS	6012	561.05	10.7	886	93.35	9.5
CHEV	UTILITY	1994	SHA352	1GCFC24H8RZ266579	7200					GAS	39079	3164.4	12.3	10192	849.8	12.0
TOYOTA	Corolla	2003	SHA362	1NXBR32E53Z000349	2700					GAS	2232	85.93	26.0	0	0	0.0
TOYOTA	COROLLA	2003	SHA363	1NXBR32E93Z011046	2700					GAS	1489	63.3	23.5	0	0	0.0
CHEV	PICKUP	1994	SHA367	1GCFC24H8RZ268123	7200					GAS	1556	78.86	19.7	509	25.54	19.9
GMC	PICKUP	1994	SHA368	1GTFC24H6RE550414	7200					GAS	1426	136.13	10.5	0	0	0.0
GMC	UTILITY	1994	SHA383	1GTFC24H3RE549494	7200					GAS	12288	1261.36	9.7	1609	164.64	9.8
CHEV	UTILITY	1994	SHA384	1GBHC34KXRE177120	8600					GAS	31127	3375.3	9.2	6255	662.4	9.4
FORD	SEDAN	1998	SHA405	1FAPP6535WK269271	4078					GAS	1365	60.7	22.5	258	11.6	22.2
FORD	TAURUS	1998	SHA447	1FAPP5222WG216116	4722					GAS	21453	1107.4	19.4	5823	321	18.1
FORD	TAURUS	1998	SHA449	1FAPP5226WG216118	4722					GAS	22713	1155.6	19.7	5532	252.2	21.9
CHEV	Malibu	2002	SHA458	1G1ND521X2M645109	3090					GAS	14583	732.61	19.9	1686	48.64	34.7
FORD	PICKUP	1995	SHA547	1FTEF15Y7SLB50326	6250					GAS	20332	1512.07	13.4	3846	295.98	13.0
FORD	PICKUP	1997	SHA548	1FTDF1721VKD55817	6000					GAS	8944	703.78	12.7	0	0	0.0
CHEV	VAN	1995	SHA549	1CGCG35K25F146082	8600					GAS	34568	3022.5	11.4	8306	753.74	11.0
PTRB	FLATBED	2003	SHA653	1NPZH27X73D714835	14908					GAS	296	40.01	7.4	0	0	0.0
CHEV	VAN	1995	SHA674	1CGCG35K15F147496	8600					GAS	15244	1681	9.1	506	59	8.6
CHEV	STKE	1995	SHA675	1GBHC34K6SE240588	10000					GAS	11972	1312.79	9.1	4118	402.33	10.2
FORD	F-150	1995	SHA676	1FTEF15YXSLB50319	6250					GAS	20720	1443.2	14.4	9338	665.8	14.0
FORD	UTILITY	2003	SHA794	1FDXF46P23EC13754	15000					GAS	13746	1120.03	12.3	3797	310	12.2
TOYOTA	Corolla	2003	SHA812	1NXBR32EX32178371	2700					GAS	928	45.32	20.5	0	0	0.0
CHEV	UTILITY	1995	SHA820	1GBHC34K4SE203233	10000					GAS	26714	2550.46	10.5	6908	666.47	10.4
CHEV	UTILITY	1994	SHA821	1GBHC34K9RE311406	5960					GAS	26710	2833.05	9.4	6629	715.75	9.3

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-Use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel	Econ	Fuel							
<b>Fuel Type: GAS</b>																
CHEV	UTILITY	1995	SHA822	1GBHC34K8SE117729	10000					GAS	12919	1431.7	9.0	8222	893.24	9.2
CHEV	UTILITY	1995	SHA839	1GBHC34K2SE204476	10000					GAS	31089	3220.03	9.7	6601	678.4	9.7
CHEV	UTILITY	1991	SHA840	1GBHC34K7RE311047	5260					GAS	26744	3215.5	8.3	6373	830	7.7
CHEV	UTILITY	1995	SHA841	1GBHC34K8SE203428	10000					GAS	16982	1758.23	9.7	4265	449.74	9.5
FORD	TAURUS	1999	SHA869	1FAFP5220XG290362	4722					GAS	11977	578	20.7	4153	217.9	19.1
GMC	PICKUP	1999	SHA896	1GTGC33R3XF094531	9000					GAS	18790	1826	10.3	4442	414	10.7
FORD	PICKUP	1998	SHA897	1FTRF27Z9WK888228	6930					GAS	4879	390.2	12.5	0	0	0.0
FORD	PICKUP	2003	SHA901	1FTNF20D33ED82433	5556					GAS	9782	875.08	11.2	5663	518.87	10.9
FORD	VAN	2001	SHA912	1FTNS24LX1HB36607	XXXX					GAS	2065	120.03	17.2	962	32.33	29.8
CHEV	UTILITY	1996	SHA999	1GBGC24R5TE125582	8600					GAS	21941	2115.6	10.4	1433	108	13.3
TOYOTA	Corolla	2003	SHB125	1NXBR32E63Z183356	2700					GAS	15540	1255.86	12.4	0	0	0.0
NISSAN	Sentra	2003	SHB130	3N1CB51D63L782093	2760					GAS	23795	1027.18	23.2	2818	107.14	26.3
NISSAN	Sentra	2003	SHB134	3N1CB51D03L712850	2760					GAS	5109	238.84	21.4	1455	35.5	41.0
NISSAN	SENTRA	2003	SHB136	3N1CB51D23L775254	2760					GAS	2301	99.99	23.0	0	0	0.0
NISSAN	Sentra	2003	SHB137	3N1CB51D93L790222	2760					GAS	8636	358.05	24.1	942	40.95	23.0
NISSAN	Sentra	2003	SHB138	3N1CB51D63L795667	2760					GAS	15062	460.38	32.7	0	0	0.0
NISSAN	Sentra	2003	SHB140	3N1CB51D43L796722	2760					GAS	11878	438.4	27.1	0	0	0.0
NISSAN	Sentra	2003	SHB142	3N1CB51D63L796723	2760					GAS	4869	213	22.9	448	25.2	17.8
NISSAN	Sentra	2003	SHB143	3N1CB51D03L793235	2760					GAS	13867	530.24	26.2	2624	93.56	28.0
NISSAN	Sentra	2003	SHB144	3N1CB51D53L793246	2760					GAS	13610	538.77	25.3	0	0	0.0
CHEV	UTILITY	1996	SHB191	1GBGC24ROTE122590	8600					GAS	24905	2392.56	10.4	7365	692.76	10.6
CHEV	UTILITY	1996	SHB192	1GBGC24R5TE125033	8600					GAS	19921	1734.7	11.5	2054	148	13.9
FORD	UTILITY	1996	SHB197	1FDHF25H8TEB77037	5600					GAS	18557	1713.37	10.8	2101	191.74	11.0
CHEV	UTILITY	1996	SHB198	1GBGC24R9TE125648	9360					GAS	30397	2460.63	12.4	7919	646.18	12.3
CHEV	UTILITY	1996	SHB200	1GBGC24R7TE130380	8600				19	GAS	16556	1569.41	10.5	4581	440.92	10.4
FORD	UTILITY	1996	SHB305	1FDHF25H8TEB77040	5620					GAS	26246	2596.3	10.1	7650	696.2	11.0
CHEV	UTILITY	1996	SHB306	1GBJK34R3TE184368	10000					GAS	19662	2162.71	9.1	6259	735.17	8.5
CHEV	PICKUP	1997	SHB339	1GCCS14X8V8190112	4400					GAS	748	46.5	16.1	0	0	0.0
CHEV	PICKUP	1997	SHB397	1GCF24M9VE249787	7200					GAS	3270	278.19	11.8	850	82.99	10.2
FORD	PICKUP	2005	SHB436	1FTSF20P85EA36576	9400					GAS	11241	1079.75	10.4	5155	518.73	9.9
FORD	PICKUP	2005	SHB437	1FTSF20PX5EA36577	9400					GAS	6696	607.05	11.0	4544	420.15	10.8

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		Acq. Cost	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-Use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						EPA City Fuel Econ	Fuel Type								
<b>Fuel Type: GAS</b>															
FORD	PICKUP	2005	SHB438	1FTSF20P15EA36578	9400			0	GAS	7207	747.7	9.6	3022	273.82	11.0
FORD	PICKUP	2005	SHB440	1FTSF20PX5EA36580	9400			0	GAS	5033	508.46	9.9	3973	383.06	10.4
FORD	PICKUP	2005	SHB441	1FTWF32P65EA36581	9400			0	GAS	848	45.65	18.6	0	0	0.0
FORD	VAN	1997	SHB473	1FTJE34L9VHC12562	9500			0	GAS	32407	3181.57	10.2	7686	800.22	9.6
FORD	VAN	1997	SHB474	1FTJE34L7VHC12561	9500			0	GAS	25920	2312.48	11.2	7697	681.14	11.3
PTRB	UTILITY	2005	SHB567	2NPLHZ8X45M860594	36220			0	GAS	729	26.32	27.7	0	0	0.0
PTRB	UTILITY	2005	SHB568	2NPLHZ8X25M860593	36220			0	GAS	8450	481.21	17.6	5596	328.21	17.1
XXXX	XXXX	2005	SHB730	5B4HP42VX53405454	XXXX			0	GAS	3232	391.5	8.3	1384	194	7.1
XXXX	XXXX	2005	SHB731	5B4HP42V853405453	XXXX			0	GAS	6981	522.78	13.4	3323	272.18	12.2
XXXX	XXXX	2005	SHB732	5B4HP42V6534054	XXXX			0	GAS	1790	176.97	10.1	0	0	0.0
XXXX	XXXX	2005	SHB733	5B4HP42V53405451	XXXX			0	GAS	2213	278.6	7.9	935	184.13	5.1
CHEV	PICKUP	1998	SHB764	1GCF24M6WZ128077	7200			19585	GAS	4642	430.28	10.8	1504	161.65	9.3
FORD	VAN	2005	SHB790	1FTNS24L25HA83505	XXXX			0	GAS	6949	479.89	14.5	3921	277.52	14.1
FORD	VAN	2005	SHB791	1FTNS24L45HA83506	XXXX			0	GAS	9961	551.78	18.1	4317	231.74	18.6
FORD	VAN	2005	SHB792	1FTNS24L65HA83507	XXXX			0	GAS	1104	105.17	10.5	1104	105.17	10.5
FORD	VAN	2005	SHB793	1FTNS24L85HA83508	XXXX			0	GAS	3096	254.3	12.2	1910	157.52	12.1
FORD	VAN	2005	SHB794	1FTNS24LX5HA83509	XXXX			0	GAS	10208	724.94	14.1	5435	362.34	15.0
CHEV	VAN	1994	SHB895	1GBGP32K3R3305339	XXXX			0	GAS	2837	447.75	6.3	717	191.2	3.8
CHEV	Malibu	2004	SHB942	1G1ZT54844F207241	3290			0	GAS	23321	1212.13	19.2	0	0	0.0
TOYOTA	Camry	2004	SHB943	JTDBF30K240157478	3420			0	GAS	10345	527.58	19.6	0	0	0.0
TOYOTA	Camry	2004	SHB944	JTDBF30K140157942	3219			0	GAS	11236	556.65	20.2	247	13.76	18.0
TOYOTA	Camry	2004	SHB945	JTDBF30K740157184	3219			0	GAS	18194	902.83	20.2	0	0	0.0
TOYOTA	Camry	2004	SHB946	JTDBF30K140157956	3420			0	GAS	6867	396.62	17.3	480	26.28	18.3
TOYOTA	Camry	2004	SHB947	JTDBF32K140157842	3219			0	GAS	7245	348.83	20.8	0	0	0.0
TOYOTA	Camry	2004	SHB948	JTDBF30KX40157289	3219			0	GAS	12768	781.7	16.3	2623	177	14.8
TOYOTA	Camry	2004	SHB949	JTDBF30KX40157230	3420			0	GAS	10933	540.05	20.2	0	0	0.0
TOYOTA	Camry	2004	SHB950	JTDBF32K440157897	3219			0	GAS	43796	1742.31	25.1	3657	144.58	25.3
CHEV	Malibu	2004	SHB993	1G1ZS52F84F205738	3290			0	GAS	16160	666.4	24.2	0	0	0.0
PONT	Grand Am	2004	SHC154	1G2NG52E94M517095	3200			0	GAS	7171	306.13	23.4	2507	110.33	22.7
FORD	PICKUP	2006	SHC196	1FTSF20P96EB12579	9400			0	GAS	5938	728.03	8.2	3035	323.34	9.4
FORD	F-250	2006	SHC197	1FTSF20P56EB12580	9400			0	GAS	7893	1049.04	7.5	3770	470.06	8.0

Appendix 2: Department of Education Vehicle Data

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel								
<b>Fuel Type: GAS</b>															
TOYOTA	SEDAN	2005	SHC329	JTDBE32K753009892	XXXX				GAS	6605	277.66	23.8	917	58.37	15.7
TOYOTA	SEDAN	2005	SHC330	JTDBE32K653007292	XXXX				GAS	31307	1331.28	23.5	6860	419.03	16.4
TOYOTA	SEDAN	2005	SHC331	JTDBE32K553007557	XXXX				GAS	8315	340.26	24.4	484	20.71	23.4
TOYOTA	SEDAN	2005	SHC332	JTDBE32K753007852	XXXX				GAS	32285	1321.05	24.4	5391	213.43	25.3
TOYOTA	SEDAN	2005	SHC333	JTDBE32KX53010003	XXXX				GAS	4544	190.06	23.9	0	0	0.0
TOYOTA	SEDAN	2005	SHC334	JTDBE32K653003016	XXXX				GAS	14529	660.88	22.0	1300	68.54	19.0
TOYOTA	SEDAN	2005	SHC335	JTDBE32K253008228	XXXX				GAS	3094	138.51	22.3	0	0	0.0
TOYOTA	SEDAN	2005	SHC336	JTDBE32K853009612	XXXX				GAS	13145	492.16	26.7	1324	26.57	49.8
FORD	FLATBED	2006	SHC344	1FDWFF36P76EB24319	13000				GAS	0	0	0.0	0	0	0.0
DODGE	UTILITY	1999	SHC350	3B6KC2620XM580704	8800				GAS	24468	2567.8	9.5	5181	495.15	10.5
DODGE	UTILITY	1999	SHC351	3B6KC2627XM580702	8800				GAS	19869	2169.4	9.2	4665	435.5	10.7
DODGE	UTILITY	1999	SHC352	3B6KC2628XM580708	8800				GAS	23764	1968.59	12.1	5987	522.9	11.4
DODGE	UTILITY	1999	SHC353	3B6KC2625XM580701	8800				GAS	19430	1879.14	10.3	3230	361.51	8.9
DODGE	UTILITY	1999	SHC354	3B6KC2622XM580705	8800				GAS	22770	2286.29	10.0	5588	556.28	10.0
BUICK	SEDAN	2005	SHC355	2G4WS52J651108024	XXXX				GAS	15029	590.8	25.4	0	0	0.0
CHEV	PICKUP	1997	SHC365	1GCCS14X6V8188441	XXXX				GAS	3363	147.28	22.8	1460	67.68	21.6
FORD	VAN	1999	SHC378	2B7KB31Z1MK431016	10000				GAS	21087	2817.9	7.5	2148	275	7.8
DODGE	RAM	1999	SHC383	3B6KC2626XM580707	8800				GAS	23502	2260.47	10.4	5484	556.63	9.9
CHEV	SEDAN	2005	SHC397	1FAHP53U65A265636	XXXX				GAS	13482	622.71	21.7	1482	84.27	17.6
DODGE	PICKUP	1999	SHC449	3B6KC2627XM580697	XXXX				GAS	17342	1768.16	9.8	2782	282.73	9.8
DODGE	UTILITY	1999	SHC450	3B6KC2626XM580710	8800				GAS	28183	2563.73	11.0	6903	628.56	11.0
DODGE	UTILITY	1999	SHC451	3B6KC2623XM580714	8800				GAS	10556	972.5	10.9	2739	236.6	11.6
DODGE	RAM	1999	SHC452	3B6MF3654XM572026	XXXX				GAS	15192	1727.5	8.8	4407	537.4	8.2
DODGE	UTILITY	1999	SHC453	3B6KC2629XM579034	8800				GAS	20577	2004.1	10.3	3535	310	11.4
DODGE	VAN	2000	SHC454	2B7KB31Y7K147516	8700				GAS	29077	2623.84	11.1	7435	738	10.1
DODGE	XXXX	1998	SHC580	3B6KF2625WM269551	8800				GAS	31087	3082.6	10.1	6599	643	10.3
FORD	UTILITY	2008	SHC719	1FDSX20R78EA28953	8570				GAS	7776	635.06	12.2	5050	442.15	11.4
FORD	F-250	2008	SHC742	1FDSX20R58EA28952	XXXX				GAS	21639	1889.16	11.5	5273	454.56	11.6
FORD	UTILITY	2007	SHC749	1FDSX20R38EA28951	XXXX				GAS	21483.2	1638.3	13.1	8979	699.9	12.8
FORD	F-150	2000	SHC761	2FTRF7Z5YCA40773	XXXX				GAS	23523	1894.2	12.4	4992	369	13.5
FORD	UTILITY	2007	SHC762	1FDWX36R28EA24355	13000				GAS	3003	281.67	10.7	301	23.71	12.7

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ		Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel	Econ	Fuel							
<b>Fuel Type: GAS</b>																
FORD	RANGER	1999	SHC800	1FTYR10V5XPB66509	XXXX					GAS	24544	1277.4	19.2	7419	410.7	18.1
FORD	TAURIUS	2002	SHC801	1FAFP53262A202988	XXXX					GAS	11224	606.6	18.5	2698	151.6	17.8
FORD	TAURIUS	2002	SHC802	1FAFP53221A226171	XXXX					GAS	7659	527.1	14.5	1837	131.9	13.9
CHEV	S-10	2000	SHC876	1GDDSD1455Y8298268	XXXX				5000	GAS	12572	768.7	16.4	3298	194.9	16.9
CHEV	PICKUP	2000	SHC877	1GCHK33J0YF488233	9200					GAS	17837	1914.8	9.3	4065	461.91	8.8
CHEV	PICKUP	2000	SHC878	1GCCS1450Y8301593	4600					GAS	15283	864.16	17.7	5924	339.33	17.5
CHRY	SEDAN	2007	SHC915	1C3LC46R17N676511	XXXX					GAS	7241	359.79	20.1	1490	68.97	21.6
CHRY	SEDAN	2007	SHC916	1C3LC46R17N676508	XXXX					GAS	15444	753.19	20.5	502	25.81	19.4
CHRY	SEDAN	2007	SHC917	1C3LC46R37N676512	XXXX					GAS	10181	457.84	22.2	903	35.59	25.4
CHRY	SEDAN	2007	SHC918	1C3LC46R37N676509	XXXX					GAS	2320	114.12	20.3	0	0	0.0
CHRY	SEDAN	2007	SHC919	1C3LC46R77N676514	XXXX					GAS	16076	748.4	21.5	1523	73.99	20.6
CHRY	SEDAN	2007	SHC920	1C3LC46R77N676510	XXXX					GAS	483	23.93	20.2	0	0	0.0
CHRY	SEDAN	2007	SHC921	1C3LC46R57N676513	XXXX					GAS	33024	1422.17	23.2	659	25.33	26.0
CHEV	SEDAN	2007	SHC957	2G1WB58K089177391	XXXX					GAS	11394	641.63	17.8	2463	146.01	16.9
CHEV	SEDAN	2007	SHC958	2G1WB58K489172498	XXXX					GAS	14165	834.31	17.0	0	0	0.0
FORD	PICKUP	2008	SHD139	1FTSF20R08EC60401	XXXX					GAS	9535	1010.11	9.4	5419	541.29	10.0
FORD	PICKUP	2008	SHD160	1FTSF20R28EC60402	XXXX					GAS	8378	813.63	10.3	4642	430.82	10.8
CHEV	PICKUP	2007	SHD163	1PDXF46R98EA09249	12460					GAS	1501	235.08	6.4	1300	209.44	6.2
CHEV	VAN	2000	SHD165	1GCHG35R5Y1270788	XXXX					GAS	18547	1566.8	11.8	5427	425	12.8
DODGE	UTILITY	2001	SHD166	3B6KC26Z31M558641	XXXX					GAS	22514	2135.6	10.5	8111	760.16	10.7
DODGE	STKE	1999	SHD307	3B6MC3653XM579249	7100					GAS	6809	1000.29	6.8	2864	410.35	7.0
DODGE	SEDAN	2004	SHD352	1B3EL36T24N341619	XXXX				7200	GAS	10238	509.89	20.1	5738	301.9	19.0
DODGE	STRATUS	2004	SHD353	1B3EL36T94N341973	XXXX				7200	GAS	10187	455.4	22.4	2857	132.9	21.5
DODGE	STKE	2002	SHD433	3B6MC36552M303678	7520					GAS	17919	1827.62	9.8	8092	907.12	8.9
DODGE	UTILITY	2001	SHD434	2B7KB31Y91K537877	8700					GAS	15751	1657.79	9.5	6637	697.13	9.5
CHEV	VAN	1999	SHD435	1GCGG25R8Y1118767	XXXX				6000	GAS	22999	2074.4	11.1	6973	671.1	10.4
CHEV	S-10	2001	SHD518	1GCC5145918211302	XXXX					GAS	13973	811.9	17.2	4467	258.97	17.2
DODGE	PICKUP	2001	SHD519	3B6KC26Z31M271011	XXXX					GAS	10650	962.03	11.1	3841	426.72	9.0
DODGE	UTILITY	2001	SHD520	3B6KC26Z91M271014	8800					GAS	13126	1782.17	7.4	4904	713.34	6.9
DODGE	UTILITY	2001	SHD521	3B6KC26ZXM558636	8800					GAS	13962	1376.4	10.1	5317	535.56	9.9
CHEV	S-10	2001	SHD522	1GCC5145218206863	6000					GAS	21587	1193.04	18.1	8674	531.01	16.3

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Econ	Fuel								
<b>Fuel Type: GAS</b>															
CHEV	S-10	2001	SHD523	1GCCS145518206114	6000				GAS	19858	920.68	21.6	7377	357.97	20.6
DODGE	XXXX	2001	SHD524	3B6KC26ZGM271018	XXXX				GAS	9966	1043.56	9.6	3692	389.42	9.5
DODGE	UTILITY	2001	SHD579	386KC25251M555191	8800				GAS	4792	466.48	10.3	1846	204.12	9.0
CHEV	S-10	2000	SHD580	1GCCS1458Y8299537	XXXX				GAS	0	0	0.0	0	0	0.0
DODGE	UTILITY	2001	SHD581	3B6KC26271M583901	XXXX				GAS	22166	2351.7	9.4	6734	660.5	10.2
DODGE	UTILITY	2001	SHD582	3B6KC26791M271000	8800				GAS	9454	974.2	9.7	2086	236.6	8.8
DODGE	UTILITY	2001	SHD634	3B6KC26Z61M558603	XXXX				GAS	11895	1146.14	10.4	3862	392.26	9.8
DODGE	UTILITY	2001	SHD639	3B6KC26Z0117271D01	XXXX				GAS	24760	2517.8	9.8	9929	989.3	10.0
CHEV	SEDAN	2009	SHD670	1G1ZG57B89F132787	XXXX				GAS	3225	119.71	26.9	0	0	0.0
CHEV	SEDAN	2009	SHD671	1G1Z57B79F131081	XXXX				GAS	17263	748.99	23.0	2409	106.88	22.5
CHEV	SEDAN	2009	SHD672	1G1ZG57B59F131550	XXXX				GAS	9419	432.92	21.8	2233	94.77	23.6
CHEV	SEDAN	2009	SHD673	1G1ZG57B29F129674	XXXX				GAS	15795	573.17	27.6	0	0	0.0
CHEV	SEDAN	2009	SHD674	1G1ZG57B69F128012	XXXX				GAS	5489	273.81	20.0	3524	186.42	18.9
CHEV	SEDAN	2009	SHD675	1G1ZG57B19F30170	XXXX				GAS	5401	293.11	18.4	2390	135.79	17.6
PTRB	XXXX	2009	SHD701	2NPRHM8X79M787259	16000			146199.61	GAS	1052	107.26	9.8	0	0	0.0
CHEV	PICKUP	2009	SHD702	1GCHC44609E108084	XXXX			33172	GAS	1889	170.35	11.1	1889	170.35	11.1
CHEV	PICKUP	2009	SHD704	1GCHC44649E109903	XXXX			0	GAS	7256	485.05	15.0	3335	247.47	13.5
CHEV	PICKUP	2009	SHD705	1GCHC44649E109397	XXXX			33172	GAS	11702	961.11	12.2	8475	686.92	12.3
CHEV	PICKUP	2008	SHD706	1GCHC44689E107961	6100			0	GAS	7927	607.26	13.1	4433	331.3	13.4
CHEV	TAHOE	2003	SHD715	1GNEK13V23J271404	5300			0	GAS	15820	1213.9	13.0	6665	485.6	13.7
DODGE	STKE	2001	SHD740	3B6MC365X1M561192	7480			0	GAS	6788	696.72	9.7	3518	289.84	12.1
FORD	UTILITY	2009	SHD788	1FDSF30R09EA00826	7340			0	GAS	18416	1518.3	12.1	7976	654.7	12.2
FORD	UTILITY	2009	SHD791	1FDSF30R69EA00829	7300			0	GAS	1837	122.43	15.0	0	0	0.0
FORD	UTILITY	2009	SHD792	1FDSF30R29EA00830	10000			0	GAS	324	22.13	14.6	324	22.13	14.6
CHEV	XXXX	1990	SHD796	1GCGP32K113303768	6380			0	GAS	431	56.9	7.6	431	56.9	7.6
FORD	FLATBED	2008	SHD804	1FDWF36R58EE58062	XXXX			41632.96	GAS	26	18.12	1.4	0	0	0.0
FORD	FLATBED	2008	SHD805	1FDWF36R78EE58063	XXXX			41632.96	GAS	3672	467.6	7.9	2498	279.5	8.9
FORD	VAN	1999	SHD945	1FCJE39L6XHC01207	XXXX			0	GAS	2387	179	13.3	2387	179	13.3
FORD	VAN	2001	SHD946	1FCJE39L91HB28079	XXXX			0	GAS	4289	412.37	10.4	2776	268.68	10.3
FORD	UTILITY	2002	SHD961	1FTWF32F32EA37190	11000			0	GAS	170	16.73	10.2	170	16.73	10.2
CHEV	FLATBED	1990	SHD998	1GBHC34K1LE232934	10000			0	GAS	19023	2223.1	8.6	4609	544.8	8.5

# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA Hwy Fuel Econ		EPA City Fuel Econ	Acq. Cost	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Fuel Econ	Fuel Econ									
<b>Fuel Type: GAS</b>																
PTRB	XXXX	2009	SHE132	2NPLHM6X89M787192	XXXX				0	GAS	308	40.37	7.6	308	40.37	7.6
CHEV	MALIBU	2003	SHE190	1GIND52J43M671688	XXXX				0	GAS	13599	654.77	20.8	1342	76.86	17.5
CHEV	XXXX	2010	SHE207	1G1ZA5E06AF191022	4376				21479	GAS	2268	105.17	21.6	2268	105.17	21.6
CHEV	MALIBU	2010	SHE208	1G1ZA5E01AF191395	4376				21479	GAS	1229	69.55	17.7	1229	69.55	17.7
CHEV	XXXX	2010	SHE209	1G1ZA5E04AF192430	4376				21479	GAS	5043	249.5	20.2	5043	249.5	20.2
CHEV	XXXX	2010	SHE211	1G1ZA5E03AF192628	4376				21857	GAS	1880	90.53	20.8	1880	90.53	20.8
CHEV	MALIBU	2010	SHE213	1G1ZA5E04AF190290	4376				21875	GAS	5377	241.48	22.3	5377	241.48	22.3
CHEV	MALIBU	2010	SHE214	1G1ZA5E05AF192341	4376				21875	GAS	2946	136.01	21.7	2946	136.01	21.7
CHEV	MALIBU	2010	SHE216	1G1ZA5E01AF192661	4376				21990	GAS	1130	59.06	19.1	1130	59.06	19.1
DODGE	UTILITY	2001	SHE256	3B6KC26Z31M558638	8800				5600	GAS	6602	587.04	11.2	6602	587.04	11.2
DODGE	UTILITY	2001	SHE257	3B6KC26Z21M558601	8800				5600	GAS	3232	312.56	10.3	3232	312.56	10.3
DODGE	UTILITY	2001	SHE258	3B6KC26Z01M583903	8800				5600	GAS	6144	588.66	10.4	6144	588.66	10.4
CHEV	SEDAN	2010	SHE261	2G1WB5EK6A1100260	3570				26793.09	GAS	4975	260.3	19.1	4975	260.3	19.1
CHEV	SEDAN	2010	SHE306	2G1WA5EK3A1245386	4547				0	GAS	2607	127.31	20.5	2607	127.31	20.5
CHEV	SEDAN	2010	SHE307	2G1WA5EK7A1245651	4547				0	GAS	767	56.56	13.6	767	56.56	13.6
CHEV	SEDAN	2010	SHE311	2G1WA5EK9A1245828	4547				0	GAS	1964	125.83	15.6	1964	125.83	15.6
CHEV	SEDAN	2010	SHE312	2G1WA5EK1A1246259	4547				0	GAS	2684	139.28	19.3	2684	139.28	19.3
CHEV	SEDAN	2010	SHE313	2G1WA5EK8A1247618	4547				0	GAS	180	12.84	14.0	180	12.84	14.0
CHEV	SEDAN	2010	SHE314	2G1WA5EK9A1247255	4547				0	GAS	163	11.7	13.9	163	11.7	13.9
CHEV	SEDAN	2010	SHE315	2G1WA5EK0A1247337	4547				0	GAS	4116	211.88	19.4	4116	211.88	19.4
CHEV	SEDAN	2010	SHE318	2G1WA5EK7A1247254	4547				0	GAS	290	13.16	22.0	290	13.16	22.0
CHEV	SEDAN	2010	SHE319	2G1WA5EK2A1248425	4547				0	GAS	196	11.25	17.4	196	11.25	17.4
CHEV	SEDAN	2010	SHE320	2G1WA5EK1A1248240	4547				0	GAS	656	54.01	12.1	656	54.01	12.1
CHEV	SEDAN	2010	SHE327	2G1WA5EK2A1247937	4547				0	GAS	1536	80.36	19.1	1536	80.36	19.1
CHEV	SEDAN	2010	SHE328	2G1WA5EK1A1249422	4547				0	GAS	1870	92.61	20.2	1870	92.61	20.2
CHEV	SEDAN	2010	SHE329	2G1WA5EK4A1249530	4547				0	GAS	132	9.27	14.2	132	9.27	14.2
CHEV	SEDAN	2010	SHE330	2G1WA5EK4A1247924	4547				0	GAS	1908	114.23	16.7	1908	114.23	16.7
CHEV	SEDAN	2010	SHE332	2G1WA5EK5A1248922	4547				0	GAS	339	23.8	14.2	339	23.8	14.2
CHEV	SEDAN	2010	SHE337	2G1WA5EK1A1249128	4547				0	GAS	631	32.98	19.1	631	32.98	19.1
CHEV	SEDAN	2010	SHE341	2G1WA5EK8A1248512	4547				0	GAS	130	11.17	11.6	130	11.17	11.6
CHEV	SEDAN	2010	SHE342	2G1WA5EK7A1249165	4547				0	GAS	816	50.14	16.3	816	50.14	16.3



# Department of Education Vehicle Fuel Report

Make	Model	Year	License Plate #	VIN	GVWR	EPA		Acq. Cost	Fuel Type	In-Use Mileage	In-Use Fuel Consum.	In-use Avg Fuel Econ	Annual Mileage	Annual Fuel Consum	Annual Avg Fuel Econ
						Hwy Fuel Econ	City Fuel Econ								
<b>Fuel Type: GAS</b>															
CHEV	SEDAN	2010	SHE343	2G1WA5EK5A1249570	4547			0	GAS	1271	65.14	19.5	1271	65.14	19.5
CHEV	PICKUP	2002	SHE400	1GBHC24U62E273876	9200			8000	GAS	2932	308.2	9.5	2932	308.2	9.5
DODGE	PICKUP	2002	SHE407	3B6KC26Z42M303627	9200			7000	GAS	1358	222.95	6.1	1358	222.95	6.1
CHEV	SILVERADO	2002	SHE431	1GBGC24U02Z329069	9200			7500	GAS	1747	183.7	9.5	1747	183.7	9.5
CHEV	SILVERADO	2002	SHE432	1GBGC24U52Z327849	9200			7500	GAS	1183	92.46	12.8	1183	92.46	12.8
CHEV	SILVERADO	2002	SHE433	1GBGC24U42Z327549	9200			7500	GAS	2283	213.91	10.7	2283	213.91	10.7
CHEV	SILVERADO	2002	SHE434	1GBGC24U22Z332717	9200			7500	GAS	1358	113.82	11.9	1358	113.82	11.9
CHEV	VAN	2000	SHE482	1GCHG35RXY1269278	8800			0	GAS	14349	1203.11	11.9	3035	259.04	11.7
<b>Fuel Type: XXXX</b>															
CHRY	SEDAN	2007	SHC915	1C3LC46R17N676511	XXXX			0	XXXX	259	10.05	25.8	0	0	0.0

PV Projects

Facility	Location	Division	Size (kW)	Awardee (Confidential if not Awarded)	Awardee (Confidential if not Awarded)	Construction Schedule	Status
Molokai Airport	Terminal Roof	Airports	TBD	TBD		Negotiating PPA/U&O	Negotiating PPA/U&O
Lanai Airport	Terminal Roof	Airports	114.66	Solar City	Solar City	In Design	PPA/U&O signed
Kona International Airport	Parking Lot Shade	Airports	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
Kona International Airport	Wastewater Treatment Plant	Airports	229.30	Solar City	Solar City	In Design	PPA/U&O signed
Lihue Airport	Parking Lot Shade, Fire Station, T-Hanger Roof, Baseyard Roof	Airports	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
Waimea Kohala Airport	Terminal Roof	Airports	36.19	Solar City	Solar City	In Design	PPA/U&O signed
Maui HWY Baseyard	Mechanic Shop, Maintce Admin Bldg, Truck Shed Roof	Highways	100.80	Solar City	Solar City	In Design	PPA/U&O signed
Keanae HWY Baseyard	Truck Shed, Admin Bldg Roof	Highways	16.45	Solar City	Solar City	In Design	PPA/U&O signed
Molokai HWY Baseyard	Motor Pool, Equip Shed Roof	Highways	28.98	Hawaii Solar Finance	Solar City	In Design	PPA/U&O signed
Hilo HWY	Design and Lab Facility Roof	Highways	37.80	Solar City	Solar City	In Design	PPA/U&O signed
Kahului Harbor	Passenger Lounge, Pier 1 Shed	Harbors	78.96	Solar City	Solar City	In Design	PPA/U&O signed
Barbers Point Harbor	Shed Building Roof	Harbors	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
Foreign Trade Zone	Building Roof	FTZ	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
Harbors Pier 2	Building Roof	Harbors	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
University of Hawaii Coconut Island	New Educational Building and Newer Dorms	UH	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
University of Hawaii Coconut Island	New Pauley Lab	UH	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
University of Hawaii Coconut Island	Boat House	UH	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
University of Hawaii Coconut Island	Covered Walkway	UH	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O
University of Hawaii Coconut Island	West Annex Lab, Old Pauley Lab, New Tanks	UH	TBD			Negotiating PPA/U&O	Negotiating PPA/U&O

Appendix 4: Department of Transportation - Airports Division Fuel Data  
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License Plate	Section	Cost Center	Fuel Config	Vehicle Mileage	Fuel Consumption	Average Vehicle MPG
4379 Total	VIP	VIP	E-10	48	4.8	10.0
4408 Total	PM	PM	E-10	233	64.5	3.6
4437 Total	EQ	EQ	Diesel	1016.6	369	2.8
4451 Total	EQ	EQ	Diesel	797	168.7	4.7
4454 Total	EQ	EQ	Diesel	383	67.2	5.7
4817 Total	DIV	DIV	E-10	48100	52.8	911.0
4884 Total	AIR-E	2040	E-10	209	16.8	12.4
4885 Total	PM	2185	E-10	211	36.0	5.9
4886 Total	AIR-E	2040	E-10	268	50.9	5.3
4887 Total	AM	2185	E-10	168	6.6	25.5
4888 Total	PM	2185	E-10	3608	359.3	10.0
4893 Total	PM	2185	E-10	1970	134.8	14.6
4894 Total	PM	2185	E-10	2043	143.9	14.2
4898 Total	SK	2185	E-10	1312	88	14.9
4900 Total	OME	2185	E-10	1068	88.6	12.1
6112 Total	LS	LS	E-10	231	47	4.9
6114 Total	LS	2185	E-10	2268	294.5	7.7
6324 Total	PM	2185	E-10	9029	1096.1	8.2
7232 Total	0	2185	Diesel	694.5	143.3	4.8
7258 Total	AM	2185	E-10	1176	126.8	9.3
7371 Total	LB	2185	E-10	652	58.7	11.1
7712 Total	LS	2185	E-10	3091	188.3	16.4
7787 Total	AM	2185	E-10	666	84	7.9
7933 Total	OM	2185	E-10	0	8	0.0
7988 Total	OME	2185	E-10	45350	175.5	258.4
8055 Total	LS	2185	E-10	761	96.0	7.9
8058 Total	LS	2185	E-10	269	53.5	5.0
8081 Total	LS	2185	E-10	1926	284	6.8
8195 Total	PM	2185	E-10	20813	131.2	158.6
8201 Total	LS	2185	E-10	53.9	20.8	2.6
8315 Total	LS	2185	E-10	836	89.0	9.4
8477 Total	DIV	2040	E-10	340	17.5	19.4
8478 Total	AM	2185	E-10	2883	190.0	15.2
8491 Total	PM	2185	E-10	148	42.4	3.5
8571 Total	PM	2185	Diesel	151	39.5	3.8
8658 Total	PM	2185	E-10	616	69.6	8.9
8728 Total	LS	2185	E-10	428	81.6	5.2
8729 Total	EQ	2185	E-10	928.5	250	3.7
8730 Total	PM	2185	E-10	2495	196.9	12.7
8773 Total	LB	2185	E-10	656	94.9	6.9
8774 Total	AIR-E	2040	E-10	961	53.3	18.0
8775 Total	OSD	2187	E-10	1019	48.3	21.1
8776 Total	AIR-E	2070	E-10	1816	85.4	21.3
8874 Total	K9	2187	E-10	774	55.3	14.0
8876 Total	K9	2187	E-10	1514	88	17.2
8905 Total	PM	2185	E-10	331	98.5	3.4
8906 Total	DIV	2060	E-10	1453	62.6	23.2
8926 Total	OME	2185	E-10	709	24.6	28.8
9029 Total	COM	2195	E-10	337	18.8	17.9
9187 Total	PM	2185	E-10	382	29.5	12.9
9436 Total	VIP	2190	E-10	853	85.2	10.0
9565 (V-4) Total	OSD	2187	E-10	0	10	0.0
9594 (V-3) Total	OSD	2187	E-10	0	12	0.0

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<b>9595 (V-1) Total</b>	OSD	2187	E-10	3578.5	64	55.9
<b>9600 Total</b>	LS	2185	E-10	1392	86.8	16.0
<b>9621 Total</b>	AM	2185	E-10	1384	112.3	12.3
<b>9677 Total</b>	OKA	2485	E-10	5998.1	232	25.9
<b>9678 Total</b>	OCU	2186	E-10	1258	113.9	11.0
<b>9679 Total</b>	AM	2185	Diesel	1218	121.3	10.0
<b>9680 Total</b>	AM	2185	Diesel	443	33.3	13.3
<b>9701 Total</b>	LB	2185	E-10	74161	370.9	199.9
<b>9929 Total</b>	LB	2185	E-10	3070	421.6	7.3
<b>9991 Total</b>	ODF	2285	E-10	3708	87	42.6
<b>A119 Total</b>	KALAELOA	2485	E-10	90915	20.9	4350.0
<b>A286 Total</b>	Code 22	2195	Diesel		23	0.0
<b>A473 Total</b>	PM-AC	2185	E-10	3413	473.0	7.2
<b>A499 K-9 ASTRO VAN Total</b>	K-9		E-10	3595	316.3	11.4
<b>A500 K-9 VAN Total</b>	K-9	2187	E-10	11932	849.2	14.1
<b>A515 Total</b>	AIR-OSM	2195	E-10	471	174.2	2.7
<b>A557 (V-7) Total</b>	OSD Sheriff	2187	E-10	2872	235.5	12.2
<b>A558 (V-8) Total</b>	OSD Sheriff	2187	E-10	5411	355.3	15.2
<b>A559 (V-9) Total</b>	SHERIFF	2187	E-10	12043	1583.6	7.6
<b>A560 (V-6) Total</b>	SHERIFF SHERIFF		E-10	3362	282.4	11.9
<b>A604 Total</b>	OSM OSM		E-10	507	69.0	7.3
<b>A630 Total</b>	DIV DIV		E-10	0	12.5	0.0
<b>A709 (V-10) Total</b>	SHERIFF SHERIFF		E-10	3356	514.6	6.5
<b>A710 Total</b>	Ramp Ramp		E-10	9508	843.6	11.3
<b>A729 (V-11) Total</b>	Sheriff Sheriff		E-10	12519	1062.4	11.8
<b>A730 (V-14) Total</b>	Sheriff		E-10	15415	1405.9	11.0
<b>A731 (V-16) Total</b>	Sheriff		E-10	14221	1167.1	12.2
<b>A733 (V-15) Total</b>	Sheriff		E-10	10846	663.2	16.4
<b>A748 (V-12) Total</b>	Sheriff		E-10	11931	1148	10.4
<b>A868 Total</b>	EQ		Diesel	900	295.5	3.0
<b>AN318 Total</b>	Offroad		E-10	628.3	53.7	11.7
<b>AN322 Total</b>	Offroad		E-10	538	32.3	16.7
<b>AN436 (MULE Kawasaki) Total</b>			E-10	262	118	2.2
<b>AN439 (Tiger Lift) Total</b>			E-10	2236	139.4	16.0
<b>AN446 (Tiger Mini-Dump) Total</b>			E-10	3449	147.2	23.4
<b>AN447 (Tiger Mini-Dump) Total</b>			E-10	3478.9	60.3	57.7
<b>AN451 (Vantage Dump) Total</b>			E-10	879.7	29.1	30.2
<b>AN452 (Vantage Utility) Total</b>			E-10	5114	174.4	29.3
<b>AN453 (Vantage Utility) Total</b>			E-10	16339	402.1	40.6
<b>AN454 (Vantage Van) Total</b>			E-10	3104	80.9	38.4
<b>AN460 (Vantage Xtra-Cab) Total</b>			E-10	1580	53.4	29.6
<b>AN461 (Vantage Xtra-Cab) Total</b>			E-10	343	129.2	2.7
<b>AN462 (Vantage Std Cab) Total</b>			E-10	6577.2	159.9	41.1
<b>AN463 (Vantage Crew Cab) Total</b>			E-10	3321	127.1	26.1
<b>AN464 (Vantage Crew Cab) Total</b>			E-10	2786	127.5	21.9
<b>AN465 (Vantage Van) Total</b>			E-10	2057	65.7	31.3
<b>AN471 TIGER UTILITY 08 Total</b>			E-10	67.8	85.6	0.8
<b>AN472 TIGER UTILITY 08 Total</b>			E-10	1157	64.4	18.0
<b>AN473 TIGER UTILITY 08 Total</b>			E-10	1111	70.8	15.7
<b>AN474 TIGER UTILITY 08 Total</b>			E-10	3418	205.7	16.6
<b>AN475 TIGER DUMP 08 Total</b>			E-10	1116	92.8	12.0
<b>AN476 TIGER DUMP 08 Total</b>			E-10	2002	142.8	14.0
<b>AN477 TIGER DUMP 08 Total</b>			E-10	595.6	50.4	11.8
<b>AN478 TIGER DUMP 08 Total</b>			E-10	524	64.4	8.1
<b>AN479 TIGER DUMP 08 Total</b>			E-10	518.6	37	14.0
<b>AN483 VANTAGE 08 Total</b>			E-10	569	22.6	25.2
<b>AN484 VANTAGE 08 Total</b>			E-10		10.3	0.0

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<b>AN485 VANTAGE 08 Total</b>		E-10		10	0.0
<b>AN486 TIGER Total</b>		E-10		15.5	0.0
<b>AN487 (Vantage Utility) Total</b>		E-10		9.5	0.0
<b>B592 Total</b>	OEL	E-10	2594	584.2	4.4
<b>B623 Total</b>	Labor Shop	E-10	3373	644.2	5.2
<b>B722 Total</b>	Fire	E-10	5306	558.3	9.5
<b>B723 Total</b>	Fire	E-10	1203	100.8	11.9
<b>B780 Total</b>	SK	E-10	4535	377.5	12.0
<b>B959 Total</b>	OCU	E-10	1486	189.9	7.8
<b>B972 K-9 JEEP CHEROKEE Total</b>		E-10	1093	58.6	18.7
<b>C103 Total</b>	OME	E-10	1860	239.5	7.8
<b>C165 (SWEEPER) Total</b>	EQ	Diesel	3620	947.4	3.8
<b>C166 (SWEEPER) Total</b>	EQ	Diesel	3769	717.6	5.3
<b>C227 Total</b>	Fire	Diesel	6368	11.0	578.9
<b>C228 Total</b>	Fire	Diesel	6409	369.8	17.3
<b>C236 (DURANGO) Total</b>	OMB	E-10	1409	240.2	5.9
<b>C237 (DURANGO) Total</b>	OMF	E-10	2749	400.8	6.9
<b>C286 (DURANGO) Total</b>	OME	E-10	5065	711.4	7.1
<b>C301 (Dodge Caravan) Total</b>	OCU	E-10	7602	650.2	11.7
<b>C302 (Dodge Caravan) Total</b>	OCU	E-10	11601	1688.8	6.9
<b>C303 (Dodge Caravan) Total</b>	VIP	E-10	2132	276.4	7.7
<b>C304 (Ford F250 P/U) Total</b>	Landscape	E-10	2542	532.4	4.8
<b>C305 (Ford Ranger P/U) Total</b>	OMB	E-10	1220	189.2	6.4
<b>C307 (Ford F250 P/U) Total</b>	OMB	E-10	1807	296.2	6.1
<b>C315 (Sweeper) Total</b>	EO	Diesel	6318	1487.1	4.2
<b>C316 HEIL(Ford F350) Total</b>	EO	Diesel	3488	291.3	12.0
<b>C319 (F350 Ambulance) Total</b>	Sheriff	Diesel	930	83.5	11.1
<b>C340 (F250 P/U) Total</b>	AM	E-10	2348	225.2	10.4
<b>C341 (Expedition SUV) Total</b>	Sheriff	E-10	12711	1246.7	10.2
<b>C418 (Dodge 3/4T Utility) Total</b>	OMB	E-10	1303	148.8	8.8
<b>C419 (Dodge 3/4T Utility) Total</b>	OMB	E-10	2698	229.6	11.8
<b>C420 (Van Econoline) Total</b>	OCU	E-10	5867	878.5	6.7
<b>C421 (FORD F350 CREW CAB) Total</b>	Landscape	E-10	4760	639.6	7.4
<b>C422 (Ford Ranger P/U) Total</b>	OME	E-10	6513	713.4	9.1
<b>C423 K-9 DURANGO Total</b>	K-9	E-10	1956	189	10.3
<b>C531 (DODGE P/U) Total</b>	EO	E-10	2143	457.2	4.7
<b>C532 (Dodge Durango) Total</b>	CODE 22	E-10	6733	1104.8	6.1
<b>C565 (Explorer SUV) Total</b>	ORC	E-10	8332	1040.8	8.0
<b>C594 (Ford Ranger) Total</b>	OME	E-10	1874	369.4	5.1
<b>C662 (Saturn Vue) Total</b>	OM	E-10	2139	108.1	19.8
<b>C676 (Durango) Total</b>	OMB	E-10	1917	320.4	6.0
<b>C677 (Durango) Total</b>	Ramos	E-10		5.5	0.0
<b>C678 (Expedition) Total</b>	Sheriff	E-10	15697	1458.0	10.8
<b>C695 Total</b>	DIVISION	E-10	85	10.2	8.3
<b>C711 Total</b>	OMB	E-10	3712	428.6	8.7
<b>C712 Total</b>	OMF	E-10	10289	1203.1	8.6
<b>C806 (Crown Victoria) Total</b>	Sheriff	E-10	14700	809.6	18.2
<b>C807 (Crown Victoria) Total</b>	Sheriff	E-10	22158	1519.8	14.6
<b>C808 (Crown Victoria) Total</b>	Sheriff	E-10	14367.2	830.9	17.3
<b>C809 (Crown Victoria) Total</b>	Sheriff	E-10	26769	1996.1	13.4
<b>C857 (Y-8) Total</b>			2926	17.0	172.1
<b>C870 (Chevy S-10 P/U) Total</b>	OMF	E-10	2851	574.2	5.0
<b>C871 (Chevy S-10 P/U) Total</b>	OMF	E-10	708	86.6	8.2
<b>C872 (TAHOE) Total</b>	OME	E-10	1254	184.0	6.8
<b>C873 (Chevy P/U) Total</b>	OMF	E-10	1699	170.3	10.0
<b>C874 (Chevy w/Camper) Total</b>	OMF	E-10	1634	203.1	8.0
<b>C902 (Ford Van) Total</b>	OMF	E-10	330	124.7	2.6

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C903 (Chevy P/U) Total	Division	E-10	1635	151.6	10.8
C904 (Ford P/U) Total	OMB	E-10	2851	352.2	8.1
C905 (Ford P/U) Total	OMF	E-10	-62216	404.6	-153.8
C906 (Ford P/U) Total	ORC	E-10	1667	491.2	3.4
C937 (Ford pick-up) Total	OCU	E-10	3841	360.2	10.7
C949 Total	OMF	Diesel	3920	463.6	8.5
D101 SWEEPER Total	OMF	Diesel	9890	3106.6	3.2
D176 Total	Division	E-10	2123	124.6	17.0
D242 (Ford F350 Crew Cab) Total	OMB	E-10	5745	666.9	8.6
D243 (Ford F350 Crew Cab) Total	OMB	E-10	7569	1061.8	7.1
D244 (Ford F350 Crew Cab) Total	OMB	E-10	3859	355.8	10.8
D245 (Ford F350 Crew Cab) Total	OMB	E-10	3525	397.5	8.9
D293 Total	Division	E-10	2551	288.6	8.8
D294 (Dakota Pick up) Total	HDH	E-10	0	109.1	0.0
D295 (Int'l Dump 15 Yard) Total	OMF	Diesel	1209	361.9	3.3
D323 (Durango) Total	OME	E-10	1730	278.4	6.2
D324 (Dodge Ram 1500) Total	Division	E-10	730	82.4	8.9
D325 (Int'l Lowboy) Total	OMF	Diesel	760	146.0	5.2
D414 (Dodge 4 Door Sedan) Total	Division	E-10	1421	145.0	9.8
D415 (Dodge 4 Door Sedan) Total	Division	E-10	740	67.2	11.0
D416 (Dodge 4 Door Sedan) Total	Division	E-10	821	67.6	12.1
D417 (Ford Taurus) Total	AIR-O	E-10	559	17.0	32.9
D418 (Ford Taurus) Total	AIR-O	E-10	912	97.0	9.4
D419 (Ford 4 Door Sedan) Total	Kadokawa	E-10	9760	812.0	12.0
D440 (Dodge Ram Utility) Total	Keawe	Diesel	3108	225.5	13.8
D441 (Dodge Ram Utility) Total	Lopez	Diesel	813	70.1	11.6
D442 (Ford F250 4 Dr Dump Tot:	OMF	E-10	3286	546.1	6.0
D443 (Ford F250 4 Dr Dump Tot:	OMF	E-10	1454	1136.4	1.3
D444 (Ford F250 4 Dr Dump Tot:	OMF	E-10	4153	616.2	6.7
D445 Ford F250 Ext Cab) Total	OMF	E-10	8124	667.0	12.2
D644 (F250 Utility) Total	MB (Plumber)	E-10	3822	359.3	10.6
D647 CHEV S-10 00 Total	OMF	E-10	2674	341.0	7.8
D648 FORD F350 CREWCAB Total	OMF	E-10	8223	834.4	9.9
D649 DODGE DURANGO 01 Total	SHERIFF	E-10	1960	148.5	13.2
D650 FORD EXPLORER 00 Total	K-9 UNIT	E-10	7185	389.2	18.5
D810 FORD VAN Total	OCU	E-10	-6367	420.0	-15.2
D811 FREIGHTLINER DUMP Total	OMF	Diesel	-50134	285.3	-175.7
D838 FORD F250 DUMP Total	OMF		3566	435.6	8.2
D839 FORD F250 DUMP Total	OMF	E-10	6795	686.5	9.9
D866 FORD UTILITY W/LIFT Tot	OMF	Diesel	240	57.6	4.2
D869 FORD F150 Total	OMF	E-10	2952	256.4	11.5
D925 DODGE DAKOTA Total	ORC	E-10	27747	3422.2	8.1
D926 CHEV BLAZER Total	OSM/K9	E-10	7260	665.3	10.9
D994 DODGE RAM 3500 Total	(ELECTRICIANS)	Diesel	12666	1025.6	12.3
D995 DODGE RAM 3500 Total	(ELECTRICIANS)	Diesel	7022	574.2	12.2
E144 CHEV SILVERADO Total	OMF	E-10	3393	468.4	7.2
E146 JEEP LIBERTY Total	OSM/K9	E-10	14137	719.7	19.6
E148 CHEV BLAZER Total	OSM/K9	E-10	9411	664.2	14.2
E149 JEEP LIBERTY Total	OSM/K9	E-10	15755	830.2	19.0
E150 FORD UTILITY W/LIFT Tot.	(ELECTRICIANS)	E-10	287	53.8	5.3

Appendix 5: Department of Transportation - Harbors Division Vehicle Data

HARBORS DIVISION  
 ACT 96 Vehicle Baseline Data  
 FY 2011 (July 2010 - June 2011)

LIC. NO.	DESCRIPTION	VIN	YR	Class	Island	Vehicle Acquisition Cost (\$)	EPA Rated Fuel Economy (MPG) (city/hwy)	Type of Fuel	Milage (Miles)	Fuel Consumption (GAL)	Actual Fuel Economy (MPG)
SH 4070	P/U TRUCK CHEV FLEETSIDE	1GCCS14R9J2175844	88	Truck (0 - 10,000 GVW)	HAWAII	\$10,094	no listing	unleaded	0	0.00	o/s
SH 4078	P/U TRUCK 92 FORD F-150	2FTDF15N1NCA39867	92	Truck (0 - 10,000 GVW)	HAWAII	\$15,556	no listing	unleaded	500	102.66	4.87
SH 6901	P/U CHEV FLATBED	1GBG6H1P9RJ104067	94	Truck (20,000 - 45,000 GVW)	HAWAII	\$30,871	no listing	unleaded	0	0.00	unused
SH 7027	P/U TRUCK CHEV	1GCDC14H6RZ207273	94	Truck (0 - 10,000 GVW)	HAWAII	\$13,595	no listing	unleaded	0	0.00	o/s
SH 9716	SUV ISUZU MPVH	4S2DM58W0Y4331777	00	Truck (0 - 10,000 GVW)	HAWAII	\$22,362	17/22	unleaded	15,671	774.63	20.23
SH A865	P/U TRUCK 250 FORD F-250	1FTNW21L73ED60351	03	Truck (0 - 10,000 GVW)	HAWAII	\$24,673	15/19	unleaded	5,776	463.54	12.46
SH B632	SUV FORD ESCAPE	1FMYU93135KC92881	05	Truck (0 - 10,000 GVW)	HAWAII	\$26,924	21/25	unleaded	4,375	256.60	17.05
SH C815	PRERUNNER TOYOTA	5TEJU62NX7Z408584	07	Truck (0 - 10,000 GVW)	HAWAII	\$25,099	16/20	unleaded	7,958	396.08	20.09
SH C893	P/U DODGE DAKOTA	1D7HE22K67S152786	07	Truck (0 - 10,000 GVW)	HAWAII	\$18,726	18/23	unleaded	8,817	504.15	17.49
SH D655	SUV FORD ESCAPE	1FMCU93G09KA28943	09	Truck (0 - 10,000 GVW)	HAWAII	\$24,814	21/25	unleaded	2,807	263.06	10.67
A830	FORD P/U TRUCK	1FTYR10U41PA92546	01	Truck (0 - 10,000 GVW)	KAUAI	\$15,375	21	unl	1,412.00	89.70	15.74
C901	TOYOTA HIGHLANDER H.BRID	JTEGW21A470015	07	SUV (0 - 10,000 GVW)	KAUAI	\$35,989	32	unl/Hybrid	4,115.00	155.00	26.55
C294	TOYOTA TACOMA P/U/P	5TENX22N66Z	06	Truck (0 - 10,000 GVW)	KAUAI	\$17,682	19	unl	2,481.00	159.80	15.53
SH 7091	TRUCK FORD STYLESIDE	1FTJW36H3REA44107	94	Truck (0 - 10,000 GVW)	KAUAI	\$29,036	13	GAS	2,280.60	255.80	8.92
SH 7094	TRUCK CHEV STYLESIDE	1GCCS19Z2R8199520	94	Truck (0 - 10,000 GVW)	KAUAI	\$16,249	19	GAS	No Longer in use		
SH 8084	SUV CHEV BLAZER	1GNCS13W1S2243585	95	Truck (0 - 10,000 GVW)	KAUAI	\$22,769	17	GAS	No Longer in use		
SH 9245	P/U CHEV FLATBED	1GBHC34R7XK016843	99	Truck (0 - 10,000 GVW)	KAUAI	\$26,680	14	GAS	1,418.00	229.20	6.19
SH 9260	SUV CHEV BLAZER	1GNCS13W2XK159671	99	Truck (0 - 10,000 GVW)	KAUAI	\$32,019	16	GAS	3,136.00	331.30	9.47
SH 9261	P/U TRUCK CHEV	1GBGC24R1CF015029	99	Truck (0 - 10,000 GVW)	KAUAI	\$27,350	14	GAS	4,677.00	464.70	10.06
SH 9671	TRUCK CHEV	1GBGC24R2XF067253	99	Truck (0 - 10,000 GVW)	KAUAI	\$26,817	14	GAS	3,113.00	249.80	12.46
SH 9902	P/U TRUCK FORD	1FTYR10U41PA92546	01	Truck (0 - 10,000 GVW)	KAUAI	\$15,375	21	GAS	5,840.00	435.50	13.41
SH 4007	P/U TRUCK FORD	1FTEX15H8NKB27063	92	Truck (0 - 10,000 GVW)	MAUI	\$19,621	12/17	Gas	1,058.00	185.09	5.72
SH 4261	INTL STAKE	1HTLBD4K2EHA61438	84	Truck (10,000 - 20,000 GVW)	MAUI	\$20,661	N/A	diesel	685.00	220.07	3.11
SH 4265	P/U FORD	1FTEF15YXGPA10688	86	Truck (0 - 10,000 GVW)	MAUI	\$9,550	18/24	Gas	-	0.00	o/s
SH 4267	P/U TRUCK GMC SONOMA	1GTCT19Z9M8509359	91	Truck (0 - 10,000 GVW)	MAUI	\$17,405	18/24	Gas	1,206.00	130.70	9.23
SH 7090	SDN OLDS CUTLASS CRUISER	1G3AJ86M3R6428263	95	Sedan, Coupe, Station wagon, SUV	MAUI	\$14,765	19/29	Gas	2,750.00	130.18	21.12
SH 7596	TRUCK GMC	1GTFC24Z0S2511129	95	Truck (0 - 10,000 GVW)	MAUI	\$20,182	16/21	Gas	3,717.00	402.00	9.25
SH 7597	TRUCK GMC	1GTEC14Z3S2511132	95	Truck (0 - 10,000 GVW)	MAUI	\$15,954	16/21	Gas	5,759.00	437.80	13.15
SH 8408	P/U CHEV	1GCCS14XXVK115298	97	Truck (0 - 10,000 GVW)	MAUI	\$15,625	17/23	Gas	843.00	147.24	5.73
SH 8954	SUV CHEV BLAZER	1GNCS13W8W2228684	98	Truck (0 - 10,000 GVW)	MAUI	\$31,100	16/20	Gas	2,101.00	492.27	4.27
SH C447	P/U FORD	1FTSF20P77EA42016	07	Truck (0 - 10,000 GVW)	MAUI	\$26,940	N/A	diesel	1,776.00	228.32	7.78
SH C611	P/U FORD	1FTSF20P47EA67844	07	Truck (0 - 10,000 GVW)	MAUI	\$37,239	N/A	diesel	1,686.00	228.43	7.38
SH 4004	SDN FORD TAURUS	1FACP57U5PA115878	93	Sedan, Coupe, Station wagon, SUV	OAHU	\$18,148	19/27	unleaded	148.5	25.1	5.92
SH 4005	SDN FORD TAURUS	1FACP57U7PA115879	93	Sedan, Coupe, Station wagon, SUV	OAHU	\$18,148	19/27	unleaded	568.8	54.6	10.42
SH 4055	VAN CHEV	1CGG35K4N7101482	92	Van (passenger, cargo)	OAHU	\$23,799	14/18	unleaded	1301.0	209.9	6.20
SH 4239	P/U GMC	1GTDC14N0GF706090	86	Truck (0 - 10,000 GVW)	OAHU	\$9,006	no listing	unleaded	509.0	49.4	10.30
SH 4244	P/U CHEV	1GBGC24M4EJ146308	84	Truck (0 - 10,000 GVW)	OAHU	\$12,785	no listing	unleaded	vehicle was disposed of		

Appendix 5: Department of Transportation - Harbors Division Vehicle Data

HARBORS DIVISION  
 ACT 96 Vehicle Baseline Data  
 FY 2011 (July 2010 - June 2011)

LIC. NO.	DESCRIPTION	VIN	YR	Class	Island	Vehicle Acquisition Cost (\$)	EPA Rated Fuel Economy (city/hwy)	Type of Fuel	Milage (Miles)	Fuel Consumption (GAL)	Actual Fuel Economy (MPG)
SH 4246	P/U TRUCK 91 GMC	1GDGR33KXMF701050	91	Truck (0 - 10,000 GVW)	OAHU	\$21,443	15/19	unleaded	267.0	35.9	7.44
SH 4253	P/U CHEV	1GBGC24M8EJ146277	84	Truck (0 - 10,000 GVW)	OAHU	\$12,785	no listing	unleaded	vehicle was disposed of		
SH 4254	P/U CHEV	1GBGC24MXEJ146300	84	Truck (0 - 10,000 GVW)	OAHU	\$12,785	no listing	unleaded	vehicle was disposed of		
SH 4262	TRUCK INT'L FTBD	1HTSHNHROMH354189	91	Truck (over 45,000 GVW)	OAHU	\$62,857	no listing	diesel	n/a	n/a	n/a
SH 4269	P/U DODGE D250	1B6KD2455HS446454	87	Truck (0 - 10,000 GVW)	OAHU	\$16,026	11/13	unleaded	1089.0	94.9	11.50
SH 4270	TRUCK GMC TC 10703	1GTDC14ZXLZ544867	90	Truck (0 - 10,000 GVW)	OAHU	\$13,724	18/21	unleaded	n/a	37.2	n/a
SH 4325	TRUCK AERIAL LADDER INTL	1HTAA17B2BHB25932	81	Truck (20,000 - 45,000 GVW)	OAHU	\$36,381	no listing	unleaded	n/a	n/a	n/a
SH 4326	TRUCK FORD F600 W/LIFT	1FDMF60KXLVA39248	90	Truck (10,000 - 20,000 GVW)	OAHU	\$47,618	11/15	unleaded	n/a	20.0	n/a
SH 4330	P/U GMC FLATBED	1GDJ7D1F8GV505206	86	Truck (10,000 - 20,000 GVW)	OAHU	\$28,576	no listing	diesel	vehicle was idle		
SH 4331	TRUCK INT'L 4900 W/BM & JIB	1HTSDZ3R9LH280523	90	Truck (20,000 - 45,000 GVW)	OAHU	\$95,229	no listing	diesel	vehicle was idle		
SH 5483	TRUCK INTL AERIAL LIFT	1HTAA19580HAZ1017	82	Truck (20,000 - 45,000 GVW)	OAHU	\$97,017	no listing	diesel	vehicle was idle		
SH 5485	TRUCK FLATBED GMC	1GDGR33K9MF701055	91	Truck (0 - 10,000 GVW)	OAHU	\$21,443	15/19	unleaded	4035.0	462.2	8.73
SH 6822	TRUCK CHEV FLTSIDE	1GCF24HXRE121390	94	Truck (0 - 10,000 GVW)	OAHU	\$16,838	14/19	unleaded	3482.6	408.2	8.53
SH 6823	VAN CHEV	1GCDG15H0RF115936	94	Truck (0 - 10,000 GVW)	OAHU	\$13,687	14/19	unleaded	3089.9	270.9	11.41
SH 7031	VAN CHEV ASTRO	1GNM15Z9JB193006	88	Van (passenger, cargo)	OAHU	\$5,900	17/22	unleaded	157.1	15.8	9.94
SH 7244	TRUCK CHEV CAB	1GBGC24K9RE303358	94	Truck (0 - 10,000 GVW)	OAHU	\$18,192	13/17	unleaded	617.0	76.0	8.12
SH 7245	TRUCK CHEV CAB	1GBGC24K5RE306404	94	Truck (0 - 10,000 GVW)	OAHU	\$18,192	13/17	unleaded	3521.0	383.2	9.19
SH 7246	TRUCK CHEV CAB	1GBGC24K5RE304040	94	Truck (0 - 10,000 GVW)	OAHU	\$18,192	13/17	unleaded	2086.4	232.1	8.99
SH 8249	P/U CHEV	1GBHC33R6TF004193	96	Truck (0 - 10,000 GVW)	OAHU	\$25,187	15/19	unleaded	4047.0	528.2	7.66
SH 9328	INTL MSTR KOMATSU PAY LDR	1HTSCABL4XH683803	99	Truck (20,000 - 45,000 GVW)	OAHU	\$69,695	no listing	diesel	93.0	23.5	3.96
SH 9419	SDN CHEV CORSICA	1G1LD55M9SY273574	95	Sedan, Coupe, Station wagon, SUV	OAHU	\$6,300	21/29	unleaded	used by OCG		
SH 9420	SDN CHEV CORSICA	1G1LD55M3SY267785	95	Sedan, Coupe, Station wagon, SUV	OAHU	\$6,300	21/29	unleaded	n/a	1.4	n/a
SH 9421	SDN CHEV CORSICA	1G1LD55M2SY272900	95	Sedan, Coupe, Station wagon, SUV	OAHU	\$6,300	21/29	unleaded	n/a	12.5	n/a
SH 9650	P/UP CHEV	1GBHC33J6XF003240	99	Truck (0 - 10,000 GVW)	OAHU	\$36,145	12/16	unleaded	4330.0	599.8	7.22
SH 9739	TRUCK PETERBILT	1NPGN08X2Y0527575	00	Truck (20,000 - 45,000 GVW)	OAHU	\$81,932	no listing	diesel	1016.0	142.7	7.12
SH 9899	VAN CARGO CHEV	1GCHG39F911133293	01	Van (passenger, cargo)	OAHU	\$56,655	no listing	diesel	300.0	38.6	7.77
SH D103	TRUCK CHEV	1GCF24K5PE221052	93	Truck (0 - 10,000 GVW)	OAHU	\$15,450	15/20	unleaded	580.3	74.7	7.77
SH D272	TRUCK FORD	2FTPF17Z63CA80280	03	Truck (0 - 10,000 GVW)	OAHU	\$8,000	11/15	unleaded	2968.0	307	9.67
SH D273	TRUCK FORD	2FTPF17Z73CA80286	03	Truck (0 - 10,000 GVW)	OAHU	\$8,000	11/15	unleaded	1189.0	120.7	9.85



Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
91812 384	89 VAN GMC RALLYSTX	1GKDG15H3K7515445	0		.00	
91812 426	91 VAN CHEV ASTRO	1GNM19Z6MB212142	0		.00	
91812 435	92 TRUCK: CHEV SUBURBAN 4 WD W/AIR	1GNK26KXNJ334168	0		21,875.07	
91812 512	94 VAN GMC SAFARI	1GKDM15Z1RB542846	0		15,072.96	
91812 649	05 FORD VAN	1FMNE31P65HA02084	0		.00	
					FUEL TYPE TOTAL	
96812 174	86 TRUCK CHEV 1/2 TON PICKUP		0	GASOLINE	.00	
96812 175	86 TRUCK CHEV 1/2 TON PICKUP		0	GASOLINE	.00	
96812 176	86 SEDAN CHEV CELEBRITY		0	GASOLINE	.00	
96812 177	86 TRUCK FORD 1/2 TON PICKUP		0	GASOLINE	.00	
96812 178	86 TRUCK FORD 1/2 TON PICKUP		0	GASOLINE	.00	
96812 179	86 TRUCK FORD 1/2 TON PICKUP		0	GASOLINE	.00	
96812 180	87 TRUCK CHEV 1/2 TON PICKUP		0	GASOLINE	.00	
96812 181	87 TRUCK CHEV 1/2 TON PICKUP		0	GASOLINE	.00	
96812 182	87 TRUCK FORD 1/2 TON PICKUP F150		0	GASOLINE	.00	
96812 183	87 TRUCK FORD PU F150	1FTDF15Y7HPA84843	0	GASOLINE	10,617.67	
96812 184	88 SEDAN FORD TAURUS 4 DOOR		0	GASOLINE	.00	
96812 185	88 TRUCK CUSHMAN UTILITY		0	GASOLINE	.00	
96812 186	86 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 187	88 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 189	88 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 190	88 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 191	88 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 192	89 TRUCK CHEV PICKUP		0	GASOLINE	.00	
96812 193	89 WAGON CHEV BLAZER S-10		0	GASOLINE	.00	
96812 194	89 WAGON CHEV BLAZER S-10		0	GASOLINE	.00	
96812 195	89 TRUCK CHEV PICKUP		0	GASOLINE	.00	
96812 196	89 TRUCK CHEV CREW CAB PICKUP		0	GASOLINE	.00	
96812 197	89 TRUCK CHEV CREW CAB		0	GASOLINE	.00	
96812 201	90 WAGON CHEV BLAZER		0	GASOLINE	.00	
96812 203	91 TRUCK CHEV PICKUP		0	GASOLINE	.00	
96812 204	91 TRUCK CHEV PICKUP		0	GASOLINE	.00	
96812 206	90 TRUCK CUSHMAN UTILITY		0	GASOLINE	.00	
96812 208	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 209	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 210	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 211	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 212	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 213	91 TRUCK FORD PICKUP		0	GASOLINE	.00	
96812 214	91 WAGON CHEV BLAZER		0	GASOLINE	.00	
96812 216	92 SEDAN FORD TAURUS 4 DOOR		0	GASOLINE	.00	
96812 218	92 TRUCK FORD RANGER PICKUP		0	GASOLINE	.00	
96812 219	92 WAGON CHEV BLAZER S-10		0	GASOLINE	.00	
96812 227	93 TRUCK CUSHMAN UTILITY 3-WHEEL		0	GASOLINE	.00	
96812 228	93 TRUCK CUSHMAN UTILITY 3-WHEEL		0	GASOLINE	.00	
96812 229	94 SEDAN PONTIAC GRAND PRIX		0	GASOLINE	.00	
96812 232	94 WAGON CHEV STATION SURBURBAN 3/4 TON 4X4		0	GASOLINE	.00	
96812 233	95 TRUCK FORD PICKUP F150	2FTEF25N9SCA29958	0	GASOLINE	.00	
96812 234	95 TRUCK FORD PICKUP F150	2FTEF15N0SCA29959	0	GASOLINE	.00	
96812 235	95 TRUCK FORD PICKUP F150	2FTEF15N7SCA29960	0	GASOLINE	.00	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96812 236	95 TRUCK FORD PICKUP F150	2FTEF15N9SCA29961	0	GASOLINE	.00	
96812 237	95 TRUCK FORD PICKUP F150	2FTEF15N0SCA29962	0	GASOLINE	.00	
96812 238	95 WAGON JEEP SPORT UTILITY	1J4FT27S9SL642619	0	GASOLINE	17,581.31	
96812 239	95 WAGON JEEP SPORT UTILITY	1J4FT27S5SL642620	0	GASOLINE	17,281.30	
96812 240	95 TRUCK CHEV PICKUP 3/4 T	1GCF24H8S2199570	0	GASOLINE	21,968.41	
96812 241	95 TRUCK CHEV 3/4 T PICKUP	1GCF24H3S2199573	0	GASOLINE	21,968.41	
96812 242	91 VAN CHEV (FROM MVSO-OAHU 9181410)	1G8EG25N3F7167870	0	GASOLINE	.00	
96812 243	97 SEDAN CHEV CAVALIER	3G1JC5248VS850735	0	GASOLINE	.00	
96812 255	93 TRUCK FORD F350 PU CREW CAB	2FTJW36H5PCB01555	0	GASOLINE	12,725.35	
96812 256	93 TRUCK FORD PU CREW CAB	2FTJW36H9PCB01557	0	GASOLINE	12,725.36	
96812 257	98 TRUCK CHEV PICKUPS10 4X2 EXTENDED CAB	1GCCS19X7WK242357	0	GASOLINE	18,108.22	
96812 258	98 TRUCK CHEV PICKUP S10 4X2 EXTENDED CAB	1GCCS19X8WK241430	0	GASOLINE	18,108.22	
96812 259	98 TRUCK CHEV PICKUP S10 4X2 EXTENDED CAB	1GCCS19XXWK241364	0	GASOLINE	18,108.21	
96812 260	98 TRUCK CHEV PICKUP S10 4X2 EXTENDED CAB	1GCCS19X4WK242171	0	GASOLINE	18,108.21	
96812 261	99 TRUCK CHEV 1/2 T PICKUP	1GCRC14VXXZ100931	0	GASOLINE	.00	
96812 262	99 TRUCK CHEV 1/2 T PICKUP	1GCRC14V9XZ100130	0	GASOLINE	.00	
96812 263	99 TRUCK CHEV 1/2 T PICKUP	1GCRC14V4XZ100181	0	GASOLINE	.00	
96812 264	99 TRUCK CHEV 1/2 T PICKUP	1GCRC14V4XZ100505	0	GASOLINE	.00	
96812 267	99 WAGON SPORTS UTILITY JEE CHEROKEE	1J4FT28X2XL578123	0	GASOLINE	23,740.48	
96812 268	99 TRUCK CHEV PU EXT CAB S-10	1GCCS19X7K8174706	0	GASOLINE	.00	
96812 269	99 TRUCK CHEV PU EXT CAB S-10	1GCDT19X5X8175600	0	GASOLINE	.00	
96812 270	00 TRUCK PICKUP GMC EXT CAB 4 X4	1GDTT19W4Y8267130	0	GASOLINE	.00	
96812 271	00 TRUCK PICKUP GMC FULL SIZE 2 X 4 1/2 TON	1GTFC14V2YZ323322	0	GASOLINE	.00	
96812 272	00 TRUCK PICKUP SILVERADO 1500	1GCEV14V7YZ293539	0	GASOLINE	.00	
96812 274	01 TRUCKSTER CUSHMAN HAULSTER	1CHMH327XYL003003	0	GASOLINE	25,266.50	
96812 275	01 SEDAN FORD FOCUS 4 DR.	1FAPFP33P11W270665	0	GASOLINE	.00	
96812 276	01 CUSHMAN 3 WHEEL TRUCKSTER	LM2056	0	GASOLINE	.00	
96812 277	01 CUSHMAN 3 WHEEL TRUCKSTER	LM2057	0	GASOLINE	.00	
96812 278	01 CUSHMAN 3 WHEEL TRUCKSTER	LM2058	0	GASOLINE	.00	
96812 279	01 TRUCK CHEV PU EXT CAB	1GCCS19W018212629	0	GASOLINE	20,679.17	
96812 280	01 WAGON STATION CHEV BLAZER 4 X 4	1GNDDT13W41K225114	0	GASOLINE	27,946.25	
96812 281	01 WAGON STATION CHEV BLAZER 4 X 4	1GNDDT13W61K228421	0	GASOLINE	24,946.25	
96812 282	01 TRUCK FORD PICKUP RANGER	1FTZR15E41PB43081	0	GASOLINE	.00	
96812 284	02 TRUCK PU FORD F-150XL SUPER CAB 4X2	1FTRX17W52NB19106	0	GASOLINE	23,684.70	
96812 285	02 WAGON STATION FORD EXCURSION XLT 4 X 4	1FMSU41F92EC53990	0	GASOLINE	38,773.08	
96812 286	02 TRUCK PICKUP FORD RANGER SCXL 4 X 4	1FTYR45E72PB00479	0	GASOLINE	21,159.55	
96812 287	02 SEDAN CHEVROLET MALIBU 4 DR.	1G1NDS52J12M723017	0	GASOLINE	16,784.17	
96812 288	02 WAGON STATION CHEVROLET 4 X 4 BLAZER	1GNDDT13W92K219411	0	GASOLINE	27,791.67	
96812 289	02 TRUCK PICKUP CHEVROLET S-10 EXT CAB	1GCCS19W228229465	0	GASOLINE	18,744.68	
96812 290	03 2003 TRUCKSTER CUSHMAN	LM20777	0	GASOLINE	29,974.66	
96812 291	03 2003 TRUCKSTER CUSHMAN	LM20776	0	GASOLINE	29,974.66	
96812 292	03 FORD SEDAN 4-DOOR	1FAPFP52UB3G236528	3,300	GASOLINE	.00	
96812 294	05 PICKUP TRUCK FORD 150	1FTRF12W95NA63038	4,750	GASOLINE	22,075.25	
96812 295	05 PICK UP TRUCK FORD 150	1FTRF12W75NA63040	4,750	GASOLINE	22,705.25	
96812 296	05 PICK UP TRUCK FORD 150	1FTRF12W05NA6309	4,750	GASOLINE	22,075.26	
96812 299	05 DODGE DR1500 PICKUP	1D7HA16N35J604299	0	GASOLINE	25,129.00	
96812 300	05 JEEP LIBERTY/SPORT	1J4GK48K05W652122	0	GASOLINE	21,407.15	
96812 301	05 JEEP LIBERTY/SPORT	1J4GK48K25W652123	0	GASOLINE	21,407.15	
96812 302	05 DODGE DR1500 PICKUP	1D7HA16NX5J604297	0	GASOLINE	25,129.01	
96812 303	07 2007 FORD F150 PICKUP TRUCK	1FTRF12V57KD42207	0	GASOLINE	28,008.02	
96812 304	07 2007 FORD F150 PICKUP TRUCK	1FTRF12V37KD42206	0	GASOLINE	28,008.02	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96812 305	07 2007 FORD F150 PICKUP TRUCK	1FTRF12V17KD42205	0	GASOLINE	28,008.02	
96812 306	07 2007 FORD F150 PICKUP TRUCK	1FTRT12V77KD42208	0	GASOLINE	26,099.70	
96822 134	80 TRUCK INTERNATIONAL FLATBED W/HYDR BOOM		0	GASOLINE	.00	
96822 141	83 TRUCK INTERNATIONAL DUMP 7 CY		0	GASOLINE	.00	
96822 142	83 TRUCK CHEV DUMP 2 1/2 CY		0	GASOLINE	.00	
96822 148	86 TRUCK FORD DUMP 2 1/2 CY		0	GASOLINE	.00	
96822 149	86 TRUCK FORD STAKE		0	GASOLINE	.00	
96822 151	87 TRUCK FORD STAKE W/CANOPY F600		0	GASOLINE	.00	
96822 152	87 TRUCK FORD STAKE W/LIFTGATE F700		0	GASOLINE	.00	
96822 156	89 TRUCK FORD DUMP 2 1/2 CY		0	GASOLINE	.00	
96822 157	89 TRUCK FORD DUMP 2 1/2 CY		0	GASOLINE	.00	
96822 158	89 TRUCK FORD DUMP 2 1/2 CY		0	GASOLINE	.00	
96822 171	93 TRUCK GMC STAKE BODY	1GDJ6H1P7R3505971	312,000	GASOLINE	.00	
96832 113	53 TRAILER UTILITY 1/2 TON		0	GASOLINE	.00	
96832 114	80 TRAILER AIRCO 200 AMP WELDER		0	GASOLINE	.00	
96832 142	07 TRAILKING DETACHABLE GOOSENECK TRAILER	1TKJ0472X9M092704	0	GASOLINE	68,645.00	
96842 101	45 GENERATOR ONAN 5KW W/FLD LIGHTS TLR MTD.		0	GASOLINE	.00	
96842 102	59 GENERATOR ONAN 5KW TRAILER MTD.		0	GASOLINE	.00	
96842 103	75 GENERATOR KOHLER 3KW TRAILER MTD.		0	GASOLINE	.00	
96842 160	91 REMOVER MACHINE TRAFFIC PAVEMENT	1245	0	GASOLINE	5,645.12	
96842 166	92 MOWER CUB CADET LAWN		0	GASOLINE	.00	
96842 183	98 TRACTOR LAWN NEW HOLLAND LS55YT	T8E0109	0	GASOLINE	4,904.14	
96842 195	01 STRIPING MACHINE KELLY-CRESWELL B421	8257	0	GASOLINE	21,040.32	
96852 120	79 SWEEPER WAYNE POWERED		0	GASOLINE	.00	
96862 107	86 SPRAYER GE 200 HP 200 GALLON		0	GASOLINE	.00	
96862 108	90 SPRAYER J. BEAN CHEMICAL 200 GALLON		0	GASOLINE	.00	
96862 111	96 SPRAYER FMC TRAILER MOUNTED	JB00403NA	0	GASOLINE	11,173.64	
96862 112	98 SPRAYER, JOHN BEAN W/SPECTRUM TRAILER	JB1545NI	0	GASOLINE	11,885.99	
96862 113	98 SPRAYER JOHN BEAN W/SPECTRUM TRAILER	JB01531NI	0	GASOLINE	11,886.00	
96862 114	98 SPRAYER SDI CHEMICAL 300 GAL TRAILER MTD	51007	0	GASOLINE	8,710.88	
96862 115	98 SPRAYER SDI CHEMICAL 300 GAL TRAILER MTD	51008	0	GASOLINE	8,710.88	
96862 116	02 CONTROL SPEED TRAILER MOUNTED	40XK111S12A020002	0	GASOLINE	11,999.00	
96862 117	02 CONTROL SPEED TRAILER MOUNTED	40XK111S42A020009	0	GASOLINE	11,999.00	
96862 118	03 SPRAYER JOHN BEAN	JX00159	0	GASOLINE	.00	
96862 119	03 SPRAYER JOHN BEAN	JX00156	0	GASOLINE	.00	
96862 123	05 EDCO TRAFFIC LINE REMOVER	TLR-7-11H	0	GASOLINE	17,849.89	
96862 129	07 MCGREGOR 300 GAL. SPRAYER	RS300734	0	GASOLINE	22,360.00	
					FUEL TYPE TOTAL	
91812 623	03 FORD UTILITY TRUCK	43ED13426	0	DIESEL	.00	
96812 220	92 TRUCK FORD CREW CAB W/DUMP		0	DIESEL	.00	
96812 221	92 TRUCK FORD CREW CAB W/DUMP		0	DIESEL	.00	
96812 222	92 TRUCK FORD CREW CAB W/DUMP		0	DIESEL	.00	
96812 223	92 TRUCK FORD CREW CAB W/DUMP		0	DIESEL	.00	
96812 224	92 TRUCK FORD CREW CAB W/DUM		0	DIESEL	.00	
96812 225	93 TRUCK FORD PICKUP F-153		0	DIESEL	.00	
96812 230	93 TRUCK CHEV CREW CAB W/DUMP		0	DIESEL	.00	
96812 231	94 TRUCK FORD PICKUP F-350		0	DIESEL	.00	
96812 244	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F3VE024894	0	DIESEL	.00	
96812 245	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F8VF025314	0	DIESEL	.00	
96812 246	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F3VF025009	0	DIESEL	.00	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96812 247	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F6VF025103	0	DIESEL	.00	
96812 248	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F9VF025371	0	DIESEL	.00	
96812 249	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F8VF024793	0	DIESEL	.00	
96812 250	97 TRUCK CHEV CREW CAB/CHAS 1 TON	1GBHC33F3VF025446	0	DIESEL	.00	
96812 251	97 TRUCK CHEV CHASSIS CAB	1GBHC33F2VF027057	0	DIESEL	.00	
96812 253	83 STATION WAGON CHEV BLAZER 4 X 4	1G8ED18J6EF119408	0	DIESEL	1,600.00	
96812 254	83 STATION WAGON CHEV BLAZER 4 X 4	1G8ED18J9EF115868	0	DIESEL	1,600.00	
96812 265	99 TRUCK CHEV UTILITY ONE TON (SURVEY CREW)	1GBHC34F7XF006304	0	DIESEL	32,810.40	
96812 266	98 TRUCK CHEV 3500 UTILITY BODY ONE TON	1GBHK34F6WE236441	0	DIESEL	.00	
96812 273	00 VAN GMC TRUCK	1GKHG35F1Y1275724	0	DIESEL	.00	
96812 283	01 TRUCK FORD CREW CAB F350	1FDW32F91EC41468	0	DIESEL	.00	
96812 293	03 FORD MPVH	1FMSU41P23ED13425	7,650	DIESEL	.00	
96812 297	04 FORD F-250 PICK UP UTILITY BODY	1FDNF20P64EE09802	0	DIESEL	32,843.38	
96812 298	04 FORD F-250 PICK-UP UTILITY BODY	1FDNF20P44EE09801	0	DIESEL	32,843.39	
96822 115	69 TRUCK INTERNATIONAL TANK	7179116346297	0	DIESEL	15,460.98	
96822 143	84 TRUCK GMC DUMP 7 CY		0	DIESEL	.00	
96822 144	84 TRUCK GMC DUMP 7 CY		0	DIESEL	.00	
96822 145	84 TRUCK GMC DUMP 7 CY		0	DIESEL	.00	
96822 146	84 TRUCK GMC DUMP 7 CY		0	DIESEL	.00	
96822 147	84 TRUCK INTERNATIONAL TRACTOR		0	DIESEL	.00	
96822 150	86 TRUCK FORD TANKER W/HERBICIDE		0	DIESEL	.00	
96822 159	90 TRUCK KENWORTH TRACTOR	1XKWD20X8LS543858	0	DIESEL	.00	
96822 160	90 TRUCK FORD AERIAL LIFT		0	DIESEL	.00	
96822 161	91 TRUCK INTERNATIONAL WATER TANK		0	DIESEL	.00	
96822 162	91 TRUCK INTERNATIONAL W/SEWER-HYDRO JET VA		0	DIESEL	.00	
96822 163	91 TRUCK FORD DUMP 2 TON		0	DIESEL	.00	
96822 164	91 TRUCK FORD DUMP 2 TON		0	DIESEL	.00	
96822 165	92 TRUCK INTERNATIONAL ASPHALT DIST.1000GAL		0	DIESEL	.00	
96822 166	93 TRUCK INTERNATIONAL TANK 2000 GALLON		0	DIESEL	.00	
96822 167	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J3RJ103960	0	DIESEL	.00	
96822 168	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J4RJ104079	0	DIESEL	.00	
96822 169	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J2RJ103903	0	DIESEL	.00	
96822 170	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J04J103916	0	DIESEL	.00	
96822 172	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J3RJ704042	0	DIESEL	.00	
96822 173	93 TRUCK CHEV DUMP 7 CY	1GBP7H1J4RJ104017	0	DIESEL	.00	
96822 174	95 TRUCK INTERNATIONAL W/HYD. CRANE STAKEBD	1HTSCABL1SH571310	0	DIESEL	.00	
96822 175	95 TRUCK FORD DUMP 7 CY F800	1FSYF80EOSVA10895	0	DIESEL	.00	
96822 176	95 TRUCK FORD DUMP 7 CY F800	1FDYF80E2SVA10896	0	DIESEL	.00	
96822 180	95 TRUCK INTERNATIONAL DUMP 2 1/2 CY	1HTSCABM3SH658117	0	DIESEL	.00	
96822 181	95 TANKER TRUCK 2000GAL GMC	182P7H1J512298	0	DIESEL	.00	
96822 182	95 TRUCK INTERNATIONAL W/HYD BOOM	1HTSCABL7SH663117	0	DIESEL	.00	
96822 183	97 TRUCK INT'L TANK 2000 GAL	1HTSDADR3VH454265	0	DIESEL	.00	
96822 184	97 TRUCK DUMP INTERNATIONAL CAB CHASSIS 7CY	1HTSDADR9VH453069	0	DIESEL	.00	
96822 185	97 TRUCK DUMP INTERNATIONAL CAB CHASSIS 7CY	1HTSDADR5VH453070	0	DIESEL	.00	
96822 186	97 TRUCK DUMP CAB & CHASSIS 2 1/2 CY INTL	1HTSCAALKVH496340	0	DIESEL	.00	
96822 187	98 TRUCK TRACTOR INT'L	2HSFBAET2WC042336	0	DIESEL	.00	
96822 188	99 VAN CHEV CHASSIS W/BODY	1GBJG31F8X1022678	0	DIESEL	.00	
96822 189	99 VAN CHEV CHASSIS W/BODY	1GBJG31F8X1014872	0	DIESEL	.00	
96822 190	99 TRUCK INT'L DUMP 7 CY CAB & CHASSIS	1HTSDADR3XH222784	35,000	DIESEL	76,919.22	
96822 191	99 TRUCK INT'L DUMP 7 CY CAB & CHASSIS	1HTSDADR5XH222785	35,000	DIESEL	76,919.22	
96822 192	01 TRUCK INTL STAKE BODY W/HYD. LIFT GATE	1HTSDAAR811333469	0	DIESEL	89,584.29	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
96822 193	01 VAN FORD CUTAWAY F450	1FDXE45FX1HB19483	0	DIESEL	.00	
96822 195	02 TRUCK GMC CAB/CHASSIS W/AERIAL BUCKET	1GDP7H1C22J502244	0	DIESEL	195,218.25	
96822 196	03 TRUCK PETERBUILT ASPEN AERIAL BDY MDL320	1NPZXOTX33D714738	0	DIESEL	.00	
96822 197	04 TRUCK INT'L DUMP 2 1/2 CU YD SBA 4 X 2	1HTMKAALX4H652483	0	DIESEL	69,676.86	
96822 198	04 TRUCK INT'L DUMP 2 1/2 CU YD SBA 4 X 2	1HTMKAAL84H652482	0	DIESEL	69,767.86	
96822 199	04 TRUCK INT'L DUMP 2 1/2 CU SBA 4 X 2	1HTMKAAL64H652481	0	DIESEL	69,676.86	
96822 200	05 TRUCK GMC TC 5500 C SERIES AND BOOM	1GDE5C1255F504746	19,500	DIESEL	105,090.72	
96822 201	05 FORD F-350 CREW CAB W/DUMP	1FDWW36P04EE09800	0	DIESEL	40,300.47	
96822 202	05 FORD F-350 CREW CAB W/DUMP	1FDWW36P84EE09799	0	DIESEL	39,258.81	
96822 203	05 FORD F-350 CREW CAB W/DUMP	1FDWW36P64EE09798	0	DIESEL	39,258.81	
96822 204	05 FORD F-350 CREW CAB W/DUMP	1FDWW36P44EE09797	0	DIESEL	39,258.81	
96822 205	06 PETERBILT W/2000 GALLON TANK	2NPLZ8X16M632621	0	DIESEL	134,713.05	
96822 206	06 FORD F-350 CREW CAB W/DUMP BOX	1FDWW36P96EA03212	0	DIESEL	43,654.12	
96822 207	07 INTERNATIONAL 2 1/2 CY DUMP TRUCKS	1HTMKAAL47H447200	0	DIESEL	81,037.99	
96822 208	07 INTERNATIONAL 2 1/2 CY DUMP TRUCK	1HTMKAAL67H447201	0	DIESEL	81,037.99	
96822 209	07 INTERNATIONAL TRUCK TRACTOR	IHSXRAPT17J447216	0	DIESEL	130,237.60	
96822 210	02 PETERBILT FLATBED W/CRANE	UT1NPZL00X13D714740	0	DIESEL	263,713.78	
96822 211	03 PETERBILT TRUCK W/CRANE & DUMP	UT1NPZL00X33D714741	0	DIESEL	283,464.08	
96822 212	07 2007 FORD 6-MAN CAB WITH DUMP	1FDWW36P77EA42916	0	DIESEL	48,679.27	
96822 213	07 2007 FORD 6-MAN CAB WITH DUMP	1FDWW36P37EA44582	0	DIESEL	48,679.27	
96822 214	07 PETERBILT TRUCK MODEL 384 WATER TANKER	2NPRH8X08M758541	0	DIESEL	159,876.14	
96822 215	08 GMC TRUCK W/1000 GALLON BITUMINOUS TANK	1GDM7C1B98F403073	0	DIESEL	182,777.65	
96822 216	08 GMC TRUCK COMMERCIAL CUTAWAY VEHICLE	1GDE5V19X8F400556	0	DIESEL	81,707.20	
96832 101	44 TRAILER W/300 GAL BITUMULS TANK		0	DIESEL	.00	
96832 121	94 TRAILER MILLER WELDING GENERATOR		0	DIESEL	.00	
96832 123	96 TANK BITUMUL TRAILER MOUNTED	L250T-802	0	DIESEL	15,874.90	
96832 124	96 TANK BITUMUL TRAILER MOUNTED	L250T-801	0	DIESEL	.00	
96842 128	79 TRACTOR JOHN DEERE W/BROOM (USED)	317931	0	DIESEL	2,994.89	
96842 138	86 TRACTOR KUBOTA W/BOMFORD SIDE & REAR		0	DIESEL	.00	
96842 141	87 GENERATOR W/FLOOD LIGHTS		0	DIESEL	.00	
96842 142	87 GENERATOR W/FLOOD LIGHTS		0	DIESEL	.00	
96842 143	87 GENERATOR W/FLOOD LIGHTS		0	DIESEL	.00	
96842 144	87 TRACTOR KUBOTA W/FLAIL MOWER		0	DIESEL	.00	
96842 145	87 TRACTOR KUBOTA W/FLAIL MOWER		0	DIESEL	.00	
96842 146	87 TRACTOR JOHN DEERE 1250 W/SWEEPER		0	DIESEL	.00	
96842 147	87 TRACTOR JOHN DEERE 1650 W/SICKLEBAR		0	DIESEL	.00	
96842 149	88 TRACTOR KUBOTA MOWER		0	DIESEL	.00	
96842 150	88 TRACTOR KUBOTA MOWER		0	DIESEL	.00	
96842 151	88 TRACTOR KUBOTA MOWER		0	DIESEL	.00	
96842 152	88 WELDER MILLER 250 AMP TRL. MTD.	JJ404150	0	DIESEL	7,050.67	
96842 153	88 WELDER MILLER 250 AMP TRL. MTD.	JJ521325	0	DIESEL	7,768.89	
96842 155	89 TRACTOR CASE W/FLAIL MOWER		0	DIESEL	.00	
96842 156	89 TRACTOR KUBOTA W/BROOM		0	DIESEL	.00	
96842 157	90 TRACTOR FORD W/EXT. FLAIL MOWER		0	DIESEL	.00	
96842 158	90 TRACTOR FORD W/FLAIL MOWER		0	DIESEL	.00	
96842 159	90 TRACTOR KUBOTA W/BROOM		0	DIESEL	.00	
96842 161	90 TRACTOR CASE I.H.		0	DIESEL	.00	
96842 162	90 TRACTOR CASE MOWER I.H.		0	DIESEL	.00	
96842 163	90 TRACTOR CASE MOWER I.H.		0	DIESEL	.00	
96842 164	91 TRACTOR CASE W/FLAIL MOWER		0	DIESEL	.00	
96842 165	91 TRACTOR CASE W/SWEEPER		0	DIESEL	.00	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96842 169	93 TRACTOR KUBOTA W/EXT FLAIL MOWER	I90029	0	DIESEL	36,745.97	
96842 172	94 TRACTOR JOHN DEERE 6200 W/FLAIL MOWER		0	DIESEL	.00	
96842 173	94 TRACTOR JOHN DEERE 6200 W/FLAIL MOWER		0	DIESEL	.00	
96842 174	94 TRACTOR JOHN DEERE 6200 W/FLAIL MOWER		0	DIESEL	.00	
96842 176	95 CASE TRACTOR W/ALAMO SUPER HVY FLAIL MOW	JJE0908218	0	DIESEL	51,723.09	
96842 180	96 TRACTOR KUBOTA 2WD	10897	0	DIESEL	.00	
96842 181	97 TRACTOR CASE IH MODEL 4230 W/EXT SR FLAI	JJE0924451	0	DIESEL	63,082.93	
96842 182	97 TRACTOR CASE IH MODEL 4230 W/SR FLAIL MO	JJE0924452	0	DIESEL	63,082.93	
96842 184	98 GENERATOR TRAILER MTD. W/LIGHT TOWER	288844	0	DIESEL	14,280.12	
96842 185	98 TRACTOR KUBOTA W/SWEEPER BROOM	30275	0	DIESEL	33,384.06	
96842 186	98 TRACTOR CASE IH W/EXT S/R MT.FLAIL MOWER	JJE1007432	0	DIESEL	60,546.84	
96842 187	98 TRACTOR CASE IH W/EXT S/R MTD.FLAIL MOWE	JJE1007433	0	DIESEL	60,546.84	
96842 188	99 TRACTOR CASE UTILITY W/FRT MTD.ROT BROOM	JJE1009709	0	DIESEL	.00	
96842 189	99 TRACTOR CASE UTILITY W/FRT MTD ROT BROOM	JJE1009369	0	DIESEL	.00	
96842 190	99 TRACTOR KUBOTA UT W/REAR/SIDE FLAIL MOWE	10560	0	DIESEL	62,391.57	
96842 191	99 TRACTOR KUBOTA UT W/REAR/SIDE FLAIL MOWE	10563	0	DIESEL	62,391.57	
96842 192	99 TRACTOR KUBOTA UTILITY W/REAR MTD. FLAIL	40354	0	DIESEL	31,061.89	
96842 193	99 TRACTOR KUBOTA UTILITY W/REAR MTD. FLAIL	40359	0	DIESEL	31,061.89	
96842 194	00 TRACTOR UTILITY KUBOTA W/BOMFORD MOWER	10714	0	DIESEL	69,891.92	
96842 196	01 THERMOPLASTIC STRIPING MACHINE W/TRAILER	1C9FP202X1B411022	0	DIESEL	.00	
96842 197	02 SWEEPER TENNANT 6550	6550-9022	0	DIESEL	45,833.04	
96842 198	93 SWEEPER, TENNANT VACUUM	3551650	0	DIESEL	1,600.00	
96842 199	95 SWEEPER NEW CLARKE AMERICAN LINCOLN	460302	0	DIESEL	500.00	
96842 200	02 SWEEPER CASE CX50 TRACTOR	JJE1020831	0	DIESEL	.00	
96842 201	03 WELDER MILLER TRAILER MOUNTED	LC019450	0	DIESEL	17,799.19	
96842 202	03 WELDER MILLER TRAILER MOUNTED	LC019441	0	DIESEL	17,799.18	
96842 203	03 TRACTOR UTILITY NWHOLLAND W/S/R MTD	200553B	0	DIESEL	72,916.20	
96842 204	03 TRACTOR NW HOLLAND UTILITY W/S/R MTD.	199949B	0	DIESEL	72,916.20	
96842 205	03 TRACTOR UTILITY NWHOLLAND W/S/R MTD	200482B	0	DIESEL	72,916.20	
96842 206	04 TRACTOR ZERO GRASSHOPPER TURN	5418440	0	DIESEL	10,729.10	
96842 207	04 ROTARY BROOM SWEEPSTER	HJH011386	5,588	DIESEL	39,791.41	
96842 208	04 CASE TRACTOR MOWER	HJT010035	0	DIESEL	62,000.00	
96842 209	05 FLOODLIGHT LIGHT TOWER TRAILER	0317PRO04	0	DIESEL	9,241.84	
96842 210	05 FLOODLIGHT LIGHT TOWER TRAILER	0318PRO04	0	DIESEL	9,241.84	
96842 211	05 FLOODLIGHT LIGHT TOWER TRAILER	0319PRO04	0	DIESEL	9,241.84	
96842 212	05 WELDER MILLER 40 TRAILER MOUNTED	MIL - 907171	0	DIESEL	28,695.00	
96842 213	05 TRACTOR MOWER NEW HOLLAND W/TIGER-GEAR	ACP253061	0	DIESEL	97,916.04	
96842 220	06 NH TRACTOR MOWER/BOOM MOWER/MOWER W/PTO	ACP272137	0	DIESEL	1,011,445.19	
96842 221	06 NH TRACTOR BOOM MOWER/MOWER W/PTO	ACP272270	0	DIESEL	101,145.19	
96842 222	06 NH TRACTOR/BOOM MOWER/MOWER W/PTO	ACP274889	0	DIESEL	101,145.19	
96842 223	96 MORBARK EZ CHIPPER MDL 2773	SN 2773	0	DIESEL	24,343.83	
96842 224	96 MORBARK EZ CHIPPER MDL 2200EZ	SN 2774	0	DIESEL	24,343.83	
96842 225	96 MORBARK CHIPPER MDL 2200EZ	SN 2775	0	DIESEL	24,343.83	
96842 226	00 CUB CADET 60" ROT MOWER	4G190280001	0	DIESEL	7,573.91	
96852 119	76 LOADER FRONT END		0	DIESEL	.00	
96852 121	81 COMPRESSOR INGERSOLL RAND		0	DIESEL	.00	
96852 122	81 COMPRESSOR INGERSOLL RAND		0	DIESEL	.00	
96852 123	81 LOADER CASE BACKHOE AND WD HAMMER		0	DIESEL	.00	
96852 125	82 GRADER GALION MOTOR		0	DIESEL	.00	
96852 126	86 CASE VIBRATORY ROLLER 2-4 TON		0	DIESEL	.00	
96852 127	87 GRADER GALION MOTOR		0	DIESEL	.00	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96852 130	87 ROLLER CASE VIRBRATORY MODEL 252		0	DIESEL	.00	
96852 131	88 ROLLER CASE VIRBRATORY MODEL 7528		0	DIESEL	.00	
96852 132	88 GRADER CATERPILLAR MOTOR		0	DIESEL	.00	
96852 133	88 LOADER JOHN DEERE W/BACKHOE		0	DIESEL	.00	
96852 134	90 FORKLIFT KOMATSU 5000 LBS.		0	DIESEL	.00	
96852 135	90 LOADER CASE BACKHOE		0	DIESEL	.00	
96852 136	91 LOADER JOHN DEERE MODEL 544E		0	DIESEL	.00	
96852 137	91 COMPRESSOR INGERSOLL RAND AIR		0	DIESEL	.00	
96852 138	92 GRADER CHAMPION MOTOR		0	DIESEL	.00	
96852 139	92 LOADER KOMATSU	12941	0	DIESEL	.00	
96852 140	93 COMPRESSOR SULLAIR 750 CFM	004-111603	0	DIESEL	40,657.42	
96852 141	93 UNILOADER CASE SKID STEER	JAF0120730	0	DIESEL	16,897.97	
96852 142	93 ROLLER DYNAPAC		0	DIESEL	.00	
96852 143	93 LOADER KOMATSU FRONT END		0	DIESEL	.00	
96852 144	94 COMPRESSOR INGERSOLL RAND AIR		0	DIESEL	.00	
96852 145	94 COMPRESSOR INGERSOLL RAND AIR		0	DIESEL	.00	
96852 146	94 COMPRESSOR INGERSOLL RAND AIR		0	DIESEL	.00	
96852 147	79 TRUCK LIFT MOD M60	794541	0	DIESEL	24,443.00	
96852 148	96 LOADER MELROE BOBCAT UNI-LOADER	512220136	0	DIESEL	.00	
96852 149	98 LOADER MELROE BOBCAT MODEL 763	512230785	0	DIESEL	.00	
96852 150	00 GRADER, MOTOR CHAMPION MODEL 710A,DIESEL	30825	0	DIESEL	111,145.15	
96852 151	00 BACKHOE/LOADER NW HOLLAND W/HYD HAMMER	31025674	0	DIESEL	77,842.07	
96852 152	01 DOZER TRACTOR D3C LCP CATERPILLAR	5GS01012	0	DIESEL	68,817.27	
96852 153	01 ROLLER DYNAPAC CC102 VIBRATORY	60115522	0	DIESEL	.00	
96852 154	01 LOADER/BACKHOE JD W/HYD BREAKER 6E5967	T0310SG896727	0	DIESEL	.00	
96852 155	02 TRUCKGMC F7 W/SCHWARZE SWEEPER	1GDP7C1CX23504097	34,800	DIESEL	173,007.46	
96852 156	02 TRUCK GMC F7 W/SCHWARZE SWEEPER	1GDP7C12C1J504263	34,800	DIESEL	173,007.46	
96852 157	02 LOADER CASE MODEL 521D	JEE0134186	0	DIESEL	99,061.87	
96852 158	02 ROLLER DYNAPAC 5-8 TON MODEL CC222	61711280	0	DIESEL	74,765.15	
96852 159	02 ROLLER DYNAPAC 2-4 TON CC102	60116496	0	DIESEL	.00	
96852 160	02 GRADER, GALION MODEL 830 B	U210932	0	DIESEL	115,624.26	
96852 161	03 GRADER CASE ARTICULATED MOTOR	HBZ0020107GR84502	0	DIESEL	111,978.45	
96852 162	03 LOADER NEW HOLLAND BACKHOE AND HAMMER	031046566	0	DIESEL	92,186.91	
96852 163	04 ROLLER HAMM ARTICULATED TANDEM HD70	1520780	0	DIESEL	64,999.58	
96852 164	05 FORKLIFT KOMATSU FD30T-14	589170A	0	DIESEL	28,124.82	
96852 165	05 BACKHOE NEW HOLLAND W/HAMMER LB1105E205	31055615/82758	0	DIESEL	88,541.00	
96852 166	06 VACUUM CLEANER TRUCK PETERBILT 357	1NPAL00X26D632940	0	DIESEL	304,057.09	
96852 167	06 KOMATSU FRONT-END WHEEL LOADER	68325	0	DIESEL	100,793.10	
96852 168	06 GMC TRUCK W/SWEEPER ATTACHMENT	1GDM7F1396F429132	33,000	DIESEL	238,558.19	
96852 169	06 2006 GMC TRUCK W/SWEEPER ATTACHMENT	1GDM7F1336F429515	33,000	DIESEL	238,558.19	
96852 170	07 PETERBILT 357 VAC-CON W/WATER TANK TRUCK	1NPAL00X27D683050	0	DIESEL	326,148.08	
96852 172	06 CASE CRAWLER EXCAVATOR	DAC251358	0	DIESEL	286,456.50	
96852 173	07 2007 CASE 845 TIER 3 MOTOR GRADER	N7AF03531	0	DIESEL	173,749.00	
96862 106	85 BULLDOZER JOHN DEERE CRAWLER		0	DIESEL	.00	
96862 109	93 CHIPPER OLATHE MODEL 986CD	986603	0	DIESEL	18,476.63	
96862 110	93 CHIPPER OLATHE MODEL 986CD	986604	0	DIESEL	18,476.63	
96862 126	07 KOMATSU CRAWLER DOZER D61EX-15	B45407	0	DIESEL	207,822.16	
96862 127	07 BANDIT 280 CHIPPER BA181	1148	0	DIESEL	48,333.02	
96862 128	07 BANDIT 280 CHIPPER BA182	1150	0	DIESEL	48,333.02	
					FUEL TYPE TOTAL	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - HAWAII DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08  
 PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
96102 826	00 HPR WORK PROGRAM		0	NOT APPLICABLE	.00	
96812 820	00 MVSO - WORK ORDER FOR MVSO C/C		0	NOT APPLICABLE	.00	
96832 102	49 TRAILER REHBAGER TIP TOP 7 TON		0	NOT APPLICABLE	.00	
96832 104	53 TRAILER JOHN DEERE W/TILTING 3 TON		0	NOT APPLICABLE	.00	
96832 107	56 TRAILER SHOP BUILT 1 1/2 TON CARGO		0	NOT APPLICABLE	.00	
96832 108	77 TRAILER FERREI CUSTOM MADE SCALE		0	NOT APPLICABLE	.00	
96832 115	84 TRAILER KING TRAIL		0	NOT APPLICABLE	.00	
96832 116	86 TRAILER ZIEMAN UTILITY		0	NOT APPLICABLE	.00	
96832 117	87 TRAILER ZIEMAN UTILITY		0	NOT APPLICABLE	.00	
96832 118	87 TRAILER ZIEMAN UTILITY		0	NOT APPLICABLE	.00	
96832 119	89 TRAILER KING TRAIL		0	NOT APPLICABLE	.00	
96832 120	93 TRAILER ZIEMAN UTILITY	1TKJ04323KM7043812	0	NOT APPLICABLE	.00	
96832 125	96 TRAILER		0	NOT APPLICABLE	.00	
96832 126	96 TRAILER		0	NOT APPLICABLE	.00	
96832 127	97 TRAILER LOAD KING		0	NOT APPLICABLE	.00	
96832 128	98 BOARD MESSAGE AMERICAN ELECTRONIC	1B4L38239V1121666	0	NOT APPLICABLE	.00	
96832 129	98 BOARD MESSAGE AMERICAN ELECTRONIC	1A9MS1510TA378129	0	NOT APPLICABLE	.00	
96832 130	98 TRAILER SPECTRUM BCT 16-7500	1A9MS1513TA378125	0	NOT APPLICABLE	.00	
96832 131	99 BOARD MESSAGE ADDCO, TRL MTD. CHANGEABLE	1S9BS2420WH364284	0	NOT APPLICABLE	.00	
96832 132	02 TRAILER ZIEMAN CARRIER 1150	585967	0	NOT APPLICABLE	32,885.21	
96832 133	02 BOARD MESSAGE SOLARTECH	1ZCT21S292ZP23815	9,999	NOT APPLICABLE	8,020.78	
96832 134	02 BOARD MESSAGE SOLARTECH	4GM2M151021408509	0	NOT APPLICABLE	.00	
96832 135	02 BOARD MESSAGE SOLARTECH	4GM2M151721408510	0	NOT APPLICABLE	.00	
96832 136	02 BOARD MESSAGE SOLARTECH	4GM2M151921408511	0	NOT APPLICABLE	.00	
96832 137	02 BOARD MESSAGE SOLARTECH	4GM2M151021408512	0	NOT APPLICABLE	.00	
96832 138	02 BOARD MESSAGE SOLARTECH	4GM2M151221408513	0	NOT APPLICABLE	.00	
96832 139	06 TRAILER ZIEMAN EQUIPMENT 1150	4GM2M151421408514	0	NOT APPLICABLE	.00	
96832 140	06 TRAILER ZIEMAN EQUIPMENT 1150	1ZCT21S286ZP26968	0	NOT APPLICABLE	11,770.76	
96832 141	06 TRAILER ZIEMAN EQUIPMENT 2327H	1ZCT21S2X6ZP26969	9,999	NOT APPLICABLE	11,770.76	
96842 214	07 TRAFFIC SIGNAL SYSTEM (1)	1ZCT31A286ZP26967	33,200	NOT APPLICABLE	26,560.33	
96842 215	07 TRAFFIC SIGNAL SYSTEM (1)	1C9B1A0A861496019	0	NOT APPLICABLE	.00	
96842 216	07 TRAFFIC SIGNAL SYSTEM (1)	1C9B1A0A861496020	0	NOT APPLICABLE	34,331.84	
96842 217	07 TRAFFIC SIGNAL SYSTEM (2)	1C9B1A0A861496021	0	NOT APPLICABLE	34,331.84	
96842 218	07 TRAFFIC SIGNAL SYSTEM (2)	1CGB1A0A261496016	0	NOT APPLICABLE	34,354.64	
96842 219	07 TRAFFIC SIGNAL SYSTEM (2)	1CGB1A0A661496017	0	NOT APPLICABLE	34,354.64	
96862 120	04 SCAFFOLD-SUSPENDE POWER CLIMBER (3)	C9GB1A0A661496018	0	NOT APPLICABLE	34,354.64	
96862 121	04 SCAFFOLD-SUSPENDE POWER CLIMBER (3)	005001	0	NOT APPLICABLE	82,639.91	
96862 122	04 SCAFFOLD-SUSPENDE POWER CLIMBER (3)	005002	0	NOT APPLICABLE	82,639.91	
96862 124	07 SCAFFOLD POWER CLIMBER PLATFORM	005003	0	NOT APPLICABLE	82,639.91	
96862 125	07 SCAFFOLD POWER CLIMBER PLATFORM	E07B3123/E07B3132	0	NOT APPLICABLE	33,998.72	
96862 125	07 SCAFFOLD POWER CLIMBER PLATFORM	E07B3131/E07B3124	0	NOT APPLICABLE	33,998.72	
					FUEL TYPE TOTAL	



Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - KAUAI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	ACQUISITION COST	DATE
91812 512	96 GMC SAFARI VAN	1GKDM15Z1RB542846	0	GASOLINE	.00	
91812 579	00 CHVY ASTRO VAN	1GNDM19W1YB181166	0	GASOLINE	.00	
98812 161	91 CHEVY 4WD BLAZER	1GNCT18Z7M0120050	0	GASOLINE	15,729.22	
98812 165	92 FORD MP UH EXPLORER AUTO	1FMDU34X3NUC83665	0	GASOLINE	21,219.04	
98812 170	92 FORD F150 PICKUP TRUCK	1FTDF15Y9NPA55985	0	GASOLINE	7,732.17	
98812 171	92 FORD SEDAN TEMPO	1FAPP36X2NK126779	0	GASOLINE	6,142.87	
98812 173	94 DODGE SHADOW SEDAN	1B3AP28D6RN219792	0	GASOLINE	11,356.68	
98812 174	94 PONTIAC GRAND PRIX SEDAN	1G2WJ52M6RF258025	0	GASOLINE	14,077.82	
98812 175	94 GMC PICKUP TRUCK 1/2 TON	1GTDC14H8RZ523807	0	GASOLINE	15,198.00	
98812 176	94 GMC CREWCAB PICKUP TRUCK	1GTGC33K5RJ727985	0	GASOLINE	20,500.07	
98812 177	94 GMC CREWCAB PICKUP TRUCK	1GTGC33KXRJ728002	0	GASOLINE	20,942.77	
98812 178	94 GMC CREWCAB PICKUP TRUCK	1GTGC33KLRJ738160	0	GASOLINE	20,942.77	
98812 179	94 GMC CREWCAB PICKUP TRUCK	1GTGC33K5RJ738341	0	GASOLINE	20,942.77	
98812 180	95 FORD RANGER PICKUP TRUCK	1FTCR14X6SPAL2888	0	GASOLINE	13,969.87	
98812 181	95 FORD TAURUS 4DR SEDAN	1FALP52U9SG207105	0	GASOLINE	14,761.76	
98812 182	95 FORD CREWCAB PICKUP TRUCK	1FTJW35H7SEA34977	0	GASOLINE	22,239.65	
98812 183	95 FORD CREWCAB PICKUP TRUCK	1FTJW35H5SEA34976	0	GASOLINE	22,239.65	
98812 184	95 FORD CREWCAB PICKUP TRUCK	1FTJW35H3SEA34975	0	GASOLINE	22,239.65	
98812 186	96 CUSHMAN REFUSE	1CUMH3273TL001507	0	GASOLINE	18,899.45	
98812 187	96 CUSHMAN REFUSE	1CUMH3275TL001508	0	GASOLINE	18,881.23	
98812 188	97 CHEVROLET CREWCAB PICKUP	1GC3C33F5VF027514	0	GASOLINE	27,633.18	
98812 189	97 CHEVROLET CREWCAB PICKUP	1GC3C33F3VF027964	0	GASOLINE	27,633.18	
98812 190	97 CHEVROLET PICKUP TRUCK	1GCCS14X3V8170091	0	GASOLINE	14,961.94	
98812 192	98 CHEVROLET S10 PICKUP TRUCK	1GCCS14X4W8236486	0	GASOLINE	16,455.00	
98812 193	98 CHEVROLET S10 PICKUP TRUCK	1GCCS14X2W8237569	0	GASOLINE	16,455.00	
98812 194	98 CHEVROLET CAVALIER 4-DOOR SEDAN	1G1JC5244W7335716	0	GASOLINE	13,922.79	
98812 198	99 FORD RANGE PICKUP TRUCK	1FTYR10V7XUB36560	4,740	GASOLINE	16,989.48	
98812 199	99 FORD RANGER PICKUP TRUCK	1FTYR10V9XUB36561	4,740	GASOLINE	16,997.81	
98812 200	99 CUSHMAN 3-WHEEL REFUSE VEHICLE	1CHMH3274XL002508	2,315	GASOLINE	21,800.00	
98812 201	00 CHEV PICKUP TRUCK	1GCCS19W4Y8243134	3,620	GASOLINE	20,277.73	
98812 202	00 CHEV MALIBU 4-DR SEDAN	1G1ND52J6Y6258330	3,080	GASOLINE	17,648.48	
98812 203	00 CHEV MALIBU 4-DR SEDAN	1G1ND52J2Y6257434	3,080	GASOLINE	17,648.48	
98812 204	01 FORD EXP SPTS UTIL 4WHDR	1FMRU16W51LB44913	5,250	GASOLINE	32,588.84	
98812 205	02 CHEVY MALIBU 4-DR SEDAN	1G1ND52J72M722857	0	GASOLINE	16,784.16	
98812 206	03 CHEVY SILVERADO PICKUP TRUCK	1GC3C14V53Z327146	0	GASOLINE	21,170.00	
98812 218	06 FORD PICKUP TRUCK	1FTSF20P66ED83910	0	GASOLINE	38,148.25	
98812 219	06 FORD RANGER PICKUP TRUCK	1FTYR44U77PA10586	0	GASOLINE	19,809.33	
98812 222	07 FORD F150 PU TRUCK	1FTYR12V97KD42209	0	GASOLINE	25,183.04	
98812 223	02 CHEVROLET PASSENGER VAN	1GAHG39R121196067	0	GASOLINE	8,300.00	
98812 224	08 FORD EXPEDITION	1FMPK16578LA08809	0	GASOLINE	40,872.52	
98812 225	08 FORD F150 PICKUP	1FTPX12V08KC83976	0	GASOLINE	34,430.89	
98812 226	08 FORD F150 PICK UP	1FTPX12V28KC83977	0	GASOLINE	34,430.89	
98812 227	08 FORD F150 PICK UP	1FTPX12V48KC83978	0	GASOLINE	34,430.90	
98842 127	94 KELLY-CRESWELL STRIPPING MACHINE (B4-2T)	7319	0	GASOLINE	19,552.45	
98842 133	99 MB STRIPING MACHINE	3-1276	0	GASOLINE	18,934.28	
98842 134	01 CUB CADET 60" ROT MOWER	4G190Z80001	0	GASOLINE	7,573.91	
98842 135	01 CUB CADET 60" ROT MOWER	4G190Z80021	0	GASOLINE	7,573.91	
98842 142	06 YAMAHA 6KW GENERATOR	253259	0	GASOLINE	2,905.19	
98842 143	06 MULTIQUIP 9.7KW W/WHEELS GENERATOR	5556151	0	GASOLINE	4,494.76	
98842 146	06 CEMENT MIXER MQ WHITEMAN	AI752965	0	GASOLINE	3,619.77	
98852 122	94 HYSTER H45XM FORKLIFT	D177807282R	0	GASOLINE	18,935.48	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - KAUAI DISTRICT OFFICE  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION----- COST	DATE
98862 103	85 STOW CONCRETE MIXER	850275	0	GASOLINE	2,597.92	
98862 109	00 SPRAYER JOHN BEAN CHEMICAL	DM10E300FE	0	GASOLINE	12,780.43	
98862 110	00 SPRAYER JOHN BEAN CHEMICAL	JB02338NJ	0	GASOLINE	12,780.43	
98862 121	02 MOTOR OUTBOARD NISSAN 18-HP	07262	0	GASOLINE	2,694.78	
98862 124	06 HOT WATER PRESSURE WASHER, SHARK 3500	S0106-117175	0	GASOLINE	4,999.97	
					FUEL TYPE TOTAL	
91822 204	94 INTERNATIONAL DUMP TRUCK	1HTGGA2T6RH571307	0	DIESEL	.00	
91822 208	94 TRUCK: INT'L UNDERBRIDGE REACHALL CRANE	1HTGGA6T2RH548438	77,000	DIESEL	428,900.34	
91822 218	95 INTERNATIONAL DUMP TRUCK	1HTGGAUT6SH641780	0	DIESEL	.00	
95822 158	03 PETERBILT TRUCK W/ASPEN AERIAL BODY	1NPZX0TX53D714739	0	DIESEL	607,831.53	
98812 172	94 CHEVY FLEETSIDE 4WD PICKUP TRUCK	1GCHK34F4RE122826	0	DIESEL	27,914.67	
98812 191	97 97 CHEVY CHASSIS CAB P/U	1GBCC24F5VE242247	8,600	DIESEL	27,027.95	
98812 195	99 CHEVROLET VAN (PASSENGER)	1GAHG39F7X1037504	0	DIESEL	32,261.00	
98812 196	99 CHEVROLET SUBURBAN WAGON	3GNFK16R0XG153863	0	DIESEL	31,391.42	
98812 197	99 CHEVROLET VAN (CARGO EXT.)	1GCHG39FXX1039531	0	DIESEL	51,983.00	
98812 207	04 DODGE CREWCAB PU TRUCK	3D7MA48C14G117954	0	DIESEL	33,560.20	
98812 208	04 DODGE CREWCAB PU TRUCK	3D7MA48C34G117955	0	DIESEL	33,560.20	
98812 209	04 FORD EXCURSION 4X4 SUV	1PMSU41P04ED77884	0	DIESEL	40,372.64	
98812 210	04 FORD F350 CREWCAB PU TRUCK	1FTWW32P74ED29680	0	DIESEL	33,129.15	
98812 211	04 FORD F350 CREWCAB PU TRUCK	1FTWW32P44ED29684	0	DIESEL	33,129.15	
98812 212	04 STAR TIGER 3-WHEEL UTILITY DUMP TRUCK	LSCAA10D53A038841	0	DIESEL	29,982.10	
98812 213	05 FORD TAURUS 4-DR SEDAN	1FAPPS3225A303675	0	DIESEL	16,343.64	
98812 214	05 FORD RANGER P/U TRUCK	1FTYR44U05PA81710	0	DIESEL	21,345.00	
98812 215	06 FORD F350 CREW CAB P/U	1FTWW30P56EA03205	0	DIESEL	33,836.52	
98812 216	05 FORD F350 CREW CAB P/U	1FTWW30P36EA03204	0	DIESEL	33,836.52	
98812 217	05 FORD F350 CREW CAB P/U	1FTWW30P16EA03203	0	DIESEL	33,836.52	
98812 220	06 FORD F350 PICKUP TRUCK	1FTWW30P26ED69946	0	DIESEL	38,601.87	
98812 221	06 FORD F350 PICKUP TRUCK	1FTWW30946ED69933	0	DIESEL	38,601.87	
98822 117	90 INTERNATIONAL DUMP TRUCK 2-1/2 C.Y.	1HTSAZPL0LH229524	0	DIESEL	39,666.89	
98822 118	91 INTERNATIONAL 7 C.Y. DUMP	1HTSDZ7N3MH326954	0	DIESEL	43,635.69	
98822 119	91 INTERNATIONAL 7 C.Y. DUMP	1HTSDPBR2NH405984	0	DIESEL	47,843.74	
98822 120	91 INTERNATIONAL FLATBED DUMP W/CRANE	1HTGELGR9MH395506	0	DIESEL	103,972.68	
98822 121	92 CHEVY FLATBED STAKE TRUCK	1GBJC34J6NE208530	0	DIESEL	25,442.36	
98822 122	92 CHEVY FLATBED STAKE TRUCK	1GBJC34JXNE207896	0	DIESEL	25,442.36	
98822 123	92 INTERNATIONAL 2000 GAL TANK TRUCK	1HTGEA2R4PH471407	0	DIESEL	77,831.50	
98822 124	94 INTERNATIONAL TRUCK TRACTOR 9300	2HSFBGR2RC087207	0	DIESEL	77,353.42	
98822 125	94 GMC FLATBED STAKE TRUCK	1GDKC34FORJ510450	0	DIESEL	27,474.84	
98822 126	99 INTL DUMP TRUCK 2.50 CY	1HTSCABL8XH649041	0	DIESEL	59,689.32	
98822 127	99 INTL W/ AERIAL BUCKET TRUCK	1HTSDAAR0XH646699	0	DIESEL	152,787.63	
98822 128	00 INTERNATIONAL CAB & CHASSIS	1HTSDADR4YH218406	0	DIESEL	78,971.04	
98822 129	02 GMC DUMP TRUCK	1GDK7H1CX2J502518	0	DIESEL	82,154.60	
98822 130	02 GMC DUMP TRUCK	1GDP7H1C92J515444	35,000	DIESEL	100,376.85	
98822 131	04 INTERNATIONAL TANK TRUCK	1HTWKADR24J091021	20,100	DIESEL	114,895.88	
98822 132	03 FORD FLATBED CAB/CHASSIS STAKE TRUCK	1FDX46P63ED88427	0	DIESEL	41,328.90	
98822 133	05 TRUCK PETERBILT DUMP	2NPLHZ8X45M856061	0	DIESEL	102,608.29	
98822 134	05 GMC FLATBED TRUCK	1GDB5C1265F528165	0	DIESEL	57,894.68	
98822 135	05 GMC FLATBED TRUCK	1GDB5C1225F528454	0	DIESEL	57,894.68	
98822 136	06 GMC SERVICE TRUCK	1GDM7C1326F429665	0	DIESEL	198,643.00	
98822 137	07 PETERBILT TRUCK TRACTOR	1XPFD40X47D673734	0	DIESEL	134,190.05	
98842 114	81 INTERNATIONAL TRACTOR W/BROOM	CHAB006811	0	DIESEL	19,418.49	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - KAUAI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	ACQUISITION COST	DATE
98842 116	83 MILLER ARC WELD MACHINE W/TRAILER	JD688685	0	DIESEL	5,460.00	
98842 125	92 CASE UTILITY TRACTOR W/MOWER	JJE0025508	0	DIESEL	3,544.91	
98842 126	93 KUBOTA W/SIDE AND REAR FLAIL	20353	0	DIESEL	35,344.88	
98842 128	93 FORD TRACTOR W/ROTARY MOWER	BD61180	0	DIESEL	32,200.73	
98842 129	93 CASE TRACTOR W/SIDE AND REAR FLAIL	JJE0032530	0	DIESEL	42,244.92	
98842 130	94 MILLER ARC WELDING GENERATOR TRAILER MTD	700619	0	DIESEL	9,533.35	
98842 131	96 CASE TRACTOR W/ SIDE & REAR FLAIL MOWER	JJE0924453	0	DIESEL	59,697.54	
98842 132	98 CASE TRACTOR MOWER W/SIDE REAR FLAIL	JJE0929986	0	DIESEL	61,410.02	
98842 136	02 TRACTOR CASE W/FLAIL MOWER	JJE1018545	0	DIESEL	64,062.09	
98842 137	04 KUBOTA 4X4 W/REAR MOWER TRACTOR	55707	0	DIESEL	45,040.85	
98842 138	04 KUBOTA W/REAR MOWER TRACTOR	11066	0	DIESEL	45,327.82	
98842 139	04 CUB CADET 54" MOWER	2H253Z80004	0	DIESEL	7,300.00	
98842 140	05 NEW HOLLAND UTIL TRCTR W/REAR ROT MOWER	HJS035642	0	DIESEL	44,791.38	
98842 141	05 NEW HOLLAND UTIL TRCTR W/REAR ROT MOWER	HJS035653	0	DIESEL	44,791.38	
98842 144	06 MILLER WELDER GENERATOR, TRLR MOUNTED		0	DIESEL	36,830.00	
98842 147	94 JOHN DEERE 6200 TRACTOR W/FLAIL MOWER		0	DIESEL	.00	
98842 148	07 UTILITY TRACTOR WITH SIDE AND REAR MOWER	HJT101851	0	DIESEL	86,301.53	
98842 149	07 UTILITY TRACTOR WITH SIDE AND REAR MOWER	HJT104966	0	DIESEL	86,301.53	
98852 119	88 MOTOR GRADER - CAT 120G	087V08556	0	DIESEL	90,732.07	
98852 120	90 CASE 621 FRONT END LOADER	JAK0021304	0	DIESEL	67,588.76	
98852 121	91 CASE LOADER/BACKHOE 4X4	JJG0071106	0	DIESEL	61,913.74	
98852 123	94 CAT 214 ROLLER VIBRATORY	09XK00136	0	DIESEL	29,744.00	
98852 124	94 JOHNSON SWEEPER	1JSVM4H21RC041016	0	DIESEL	139,500.45	
98852 125	96 LOADER/BACKHOE JOHN DEERE 310D	T0310DB824852	0	DIESEL	60,033.00	
98852 126	98 PORTABLE AIR COMPRESSOR W/TRAILER	289280UDI219	0	DIESEL	14,000.94	
98852 127	85 INTL SWR HYPRO JET VACUUM TRUCK	1HTLDTVR4FHA62673	0	DIESEL	108,923.36	
98852 128	00 CHAMPION MOTOR GRADER	30826	0	DIESEL	111,250.35	
98852 130	02 CASE 521D LOADER	JJE0134193	0	DIESEL	99,061.86	
98852 131	04 BOMAG BW120 VIBRATORY ROLLER	101170519763	0	DIESEL	32,291.46	
98852 132	04 LEBBOY 685 COMPACT GRADER	68541778	0	DIESEL	94,009.82	
98852 133	04 GMC SWEEPER	1GDM7F1395F500635	0	DIESEL	211,069.46	
98852 134	05 CASE LOADER/BACKHOE	N5C386017	0	DIESEL	87,499.44	
98852 135	05 KOMATSU WHEEL LOADER	65912	0	DIESEL	96,353.55	
98852 136	07 PETERBILT HYDRO JET VACUUM TRUCK	1NPAL00X37D673739	0	DIESEL	326,148.08	
98852 137	06 GMC SWEEPER TRUCK	1GDM7F1386F431454	0	DIESEL	219,109.96	
98852 138	06 HAMM VIBRATORY ROLLER	1395680	0	DIESEL	.00	
98852 139	07 EXCAVATOR TAKEUCHI TB175	17516092	0	DIESEL	106,978.78	
98862 108	99 MORBARK BRUSH CHIPPER TRLR MNTD	03327	0	DIESEL	30,103.97	
98862 116	04 LIGHT TOWER ALLMAND	1380PRO03	0	DIESEL	8,700.00	
98862 117	04 LIGHT TOWER ALLMAND	1381PRO03	0	DIESEL	8,700.00	
98862 118	06 LIGHT TOWER ALLMAND	P0505090008	0	DIESEL	10,863.64	
98862 119	06 LIGHT TOWER ALLMAND	P0506140011	0	DIESEL	10,863.65	
					FUEL TYPE TOTAL	
98842 145	06 TRANTEX THERMOPLASTIC STRIPING MACHINE	K8548	0	PROPANE	37,988.00	
					FUEL TYPE TOTAL	
98812 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98812 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	
98822 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98822 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - KAUAI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION----- COST	DATE
98832 107	91 LOAD KING LOWBOY TRAILER	1B4L48230M2116751	0	NOT APPLICABLE	29,594.74	
98832 108	94 ZIEMAN MSTL TRAILER	1ZCT18S14RZP17739	0	NOT APPLICABLE	4,687.65	
98832 110	96 SHOPBUILT WEIGHT SCALE TRAILER	1S9EC1613TH364445	0	NOT APPLICABLE	16,110.93	
98832 111	99 TRAIL KING DUMP TRAILER	1TKFT3023XM085139	0	NOT APPLICABLE	46,549.86	
98832 112	02 HOMAED UTILITY TRAILER	UNKNOWN147KXSKNL	1,200	NOT APPLICABLE	9,200.00	
98832 113	04 ZIEMAN TRAILER	1ZCE21E224ZP25185	2,340	NOT APPLICABLE	6,734.33	
98832 114	04 ZIEMAN TRAILER	1ZCE20E274ZP25371	0	NOT APPLICABLE	8,854.11	
98832 115	04 BRIMAR DUMP TRAILER	43YDC10275C039431	0	NOT APPLICABLE	8,437.45	
98832 116	03 CHILTON UTILITY TRAILER	14DAC08123C001097	0	NOT APPLICABLE	2,500.00	
98832 117	05 CARNAI GALV BOAT TRAILER	5FMBT2J1151507317	0	NOT APPLICABLE	1,015.62	
98832 118	07 TRAIL KING TRAILER	1TKJ047207M077305	17,180	NOT APPLICABLE	72,382.15	
98832 119	06 ECONOLINE TRAILER	42ETPN4261001080	0	NOT APPLICABLE	.00	
98832 120	07 TRAILER ZIEMAN UTILITY	1ZCT21S247ZP27732	0	NOT APPLICABLE	9,143.69	
98832 121	07 TRAILER ZIEMAN UTILITY	1ZCT21E217ZP27666	0	NOT APPLICABLE	11,856.00	
98832 122	07 TRAILER ZIEMAN RAMP	1ZCE34E2X7ZP27771	0	NOT APPLICABLE	22,031.10	
98832 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98832 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	
98842 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98842 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	
98852 115	02 MESSAGE BOARD, TRAILER MOUNTED	4GM2M151321408505	0	NOT APPLICABLE	24,921.28	
98852 116	87 JD 544D FRONT END LOADER	513368	0	NOT APPLICABLE	58,289.01	
98852 117	87 S4-6B TANDEM ROLLER	R25002U061757	0	NOT APPLICABLE	30,527.18	
98852 129	00 COMPRESSOR NAPA 80 GAL	075438	0	NOT APPLICABLE	2,029.74	
98852 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98852 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	
98862 111	01 ITCP SPEED CONTROL MONITOR TRLR MTD		0	NOT APPLICABLE	11,999.00	
98862 112	01 ITCP SPEED CONTROL MONITOR TRLR MTD		0	NOT APPLICABLE	11,999.00	
98862 113	02 MESSAGE BOARD, TRAILER MOUNTED	4GM2M151X21408503	0	NOT APPLICABLE	24,921.28	
98862 114	02 MESSAGE BOARD, TRAILER MOUNTED	4GM2M151121408504	0	NOT APPLICABLE	24,921.28	
98862 115	02 MESSAGE BOARD, TRAILER MOUNTED	4GM2M151321408505	0	NOT APPLICABLE	24,921.28	
98862 120	04 BOAT KLAMATH 14' ALUMINUM	KLOBO308L304	0	NOT APPLICABLE	4,576.02	
98862 122	06 MESSAGE BOARD, TRAILER MOUNTED 3027		0	NOT APPLICABLE	24,753.00	
98862 123	06 MESSAGE BOARD, TRAILER MOUNTED 3028		0	NOT APPLICABLE	24,753.00	
98862 125	06 PORTABLE TRAFFIC SIGNAL-TRAILER MOUNTED	1C9B1A0A361496011	0	NOT APPLICABLE	33,834.51	
98862 991	07 MISCELLANEOUS DIESEL FUEL CHARGE		0	NOT APPLICABLE	.00	
98862 992	07 MISCELLANEOUS REGULAR GAS CHARGE		0	NOT APPLICABLE	.00	
					FUEL TYPE TOTAL	

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - MAUI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
93812 102	01 FORD F-150 P/UP TRUCK	1FTRX17W31KB07259	0	GASOLINE	25,271.17	08/10/01
93812 103	94 TRUCK, GMC 3/4 TON PICK UP	1GTC24K4RE510557	0	GASOLINE	23,500.00	
94812 110	99 FORD F-150 PICKUP TRUCK	1FTRF17W0XKB67057	0	GASOLINE	21,261.96	06/25/99
94812 112	04 JEEP LIBERTY 4 DR SUV	1J4GL48K34W285101	0	GASOLINE	23,480.06	
94832 103	80 TRAILER, TANK SPRAYER ETNYRE BIT M3269	M-3269	0	GASOLINE	9,591.00	08/23/80
94842 101	75 WELDER, AIRCO ARC GAS	HF838958	0	GASOLINE	2,340.00	09/20/75
94862 104	02 300 EL CHEMICAL SPRAYER, TRAILER	4PBTC191113000078	0	GASOLINE	9,028.87	07/02/01
95812 157	91 TRUCK, CUSHMAN REFUSE DUMP UT	1CUMH327011000718	0	GASOLINE	14,063.10	01/07/91
95812 159	91 SEDAN, CHEV SPECTRUM 4DR	J81RG5172J7542099	0	GASOLINE	3,400.00	01/14/91
95812 168	93 SEDAN, CHEV LUMINA 4 DR	2G1WL54TG9N9253039	0	GASOLINE	15,853.56	07/01/93
95812 178	94 WAGON, JEEP CHEROKEE UTILITY 4X4	1J4FJ28SRL169641	0	GASOLINE	18,594.35	02/18/94
95812 179	94 WAGON, CHER SP	1J4FJ28S7RL169642	0	GASOLINE	18,594.35	02/18/94
95812 182	95 WAGON, CHEVROLET SUBURBAN 4X4	1GNGK26K4RJ395960	0	GASOLINE	25,260.57	07/15/94
95812 184	95 TRUCK, CHEVROLET S-10 1/2TON PICKUP	1GCCS14Z6S8254239	0	GASOLINE	12,715.13	08/09/95
95812 188	98 CHEV PICK-UP EXT. CAB	1FCBC19M7WE252235	0	GASOLINE	22,469.00	08/24/98
95812 191	98 CHEV S-10 PICK UP TRUCK	1GCCS14X6WK251560	0	GASOLINE	16,101.98	10/22/98
95812 192	98 CHEV S-10 PICK-UP TRUCK	1GCCS14X9WK253125	0	GASOLINE	16,101.98	10/22/98
95812 193	98 CHEV S-10 PICK-UP TRUCK	1GCCS14X1WK253197	0	GASOLINE	16,101.98	10/22/98
95812 194	98 CHEV S-10 PICK-UP TRUCK	11GCCS14XWK254302	0	GASOLINE	16,101.98	10/22/98
95812 197	99 CHEV SILVERADO 1/2 TON PICK UP	1GCBC14T9XZ121977	0	GASOLINE	20,148.00	22/22/99
95812 198	99 CHEV SILVERADO 1/2 TON PICK UP	1GCBC14T2XZ124137	0	GASOLINE	20,148.00	02/22/99
95812 199	99 JEEP CHEROKEE 4 DR S/W	1J4FT2850XL578122	0	GASOLINE	23,977.97	04/08/99
95812 200	99 JEEP CHEROKEE 4 DR S/W	1J4FT28S9XL578121	0	GASOLINE	23,977.97	04/08/99
95812 201	99 JEEP CHEROKEE 2 DOOR S/W	1J4FT27S2XL578124	0	GASOLINE	23,487.35	04/08/99
95812 202	99 FORD RANGER PICKUP TRUCK	1FTYR10V0XUB36559	0	GASOLINE	16,497.81	06/15/99
95812 203	99 FORD F-150 PICKUP TRUCK	1FTRF17W9XKB67056	0	GASOLINE	21,261.96	06/21/99
95812 205	99 CHEV P/UP W/EXT. CAB	1GCCS19X9X8198182	0	GASOLINE	19,739.46	07/29/99
95812 207	00 CHEV 1/2 TON PICKUP TRUCK	1GCBC14V5YZ295015	0	GASOLINE	19,955.42	07/21/00
95812 208	00 CHEV 1/2 TON PICKUP TRUCK	1GCBC14V7YZ296649	0	GASOLINE	19,955.42	07/21/00
95812 209	00 CHEV 1/2 TON PICKUP TRUCK	1GCBC14V8YZ295171	0	GASOLINE	19,955.42	07/21/00
95812 211	02 FORD RANGER 4X4 P/UP TRUCK	1FTYR45E52PB00478	0	GASOLINE	23,114.75	09/20/02
95812 214	05 FORD F150 FLEETSIDE	1FTRF12W85NA04806	0	GASOLINE	20,828.39	
95812 215	04 FORD RANGER S/C P/UP 4 DR	1FTZR44V24PB43451	0	GASOLINE	22,744.55	
95812 216	06 DODGE PICK-UP TRUCK	1D7HA18N56J201603	0	GASOLINE	27,936.28	
95812 217	06 FORD ESCAPE MPVH	1FMYU96H96KD56285	0	GASOLINE	34,826.58	
95812 220	08 FORD F-150 PICK-UP TRUCK	1FTRF14W87LD42210	0	GASOLINE	26,720.53	
95812 221	08 FORD ESCAPE HYBRID SUV 4WD	1FMCU59H668KB80071	0	GASOLINE	34,251.87	
95812 222	08 FORD ESCAPE HYBRID SUV 4WD	1FMCU59H48KB80070	0	GASOLINE	34,251.86	
95812 224	08 CHEV MALIBU 4 DR SEDAN	1G1ZG57B78F165648	3,440	GASOLINE	26,235.00	
95822 120	81 TRUCK, INT 1724 CREWCAB STAKE DUMP	LHTAA17BOHB33852	0	GASOLINE	22,944.36	03/23/82
95832 107	94 TRAILER, ZIEMAN TILT	1ZCT31A21P2P17416	0	GASOLINE	15,890.07	08/27/93
95832 114	06 TRAIL KING TRAILER	1TKJ047227M077306	0	GASOLINE	69,894.15	
95842 146	94 STRIPER, KELLY-CRESSWELL W/TRACTION BDC	7440	0	GASOLINE	11,190.00	01/07/94
95842 150	96 ERADICATOR	ROBIN 1098158	0	GASOLINE	7,209.00	11/08/96
95842 151	96 GENERATOR HONDA	5/37583	0	GASOLINE	2,945.00	11/08/96
95842 157	99 MD DOUBLE GUN STRIPER MACHINE W/TRAILER	14DAC0819XC000230	0	GASOLINE	13,667.00	08/26/99
95842 182	06 MCGREGGOR HERBICIDE SPAYER TRAILER	RS335708	0	GASOLINE	25,812.33	
95842 183	06 MCGREGGOR HERBICIDE SPRAYER, SKID MNTD	RS300702	0	GASOLINE	21,979.03	
95862 113	02 300 EL CHEMICAL SPRAYER, TRAILER	4PBTC191X13000080	0	GASOLINE	9,028.87	09/25/01
95862 114	02 300 EL CHEMICAL SPRAYER, TRAILER	4PBTC191313000079	0	GASOLINE	9,028.88	09/25/01
95862 115	02 STONE CONCRETE MIXER W/TRAILER	092002139	0	GASOLINE	5,208.30	06/28/02

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - MAUI DISTRICT OFFICE  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
					FUEL TYPE TOTAL	
93822 104	97 INTERN'L 2 1/2 CY DUMP TRK(TRANS FM MAUI	LHTSCABL1VH453066	0	DIESEL	46,598.86	03/24/97
93842 106	06 CASE IH TRACTOR MOWER	HFJ038654	0	DIESEL	52,708.00	
93842 107	06 CASE IH TRACTOR MOWER	HFJ038662	0	DIESEL	46,353.87	
93852 102	00 JCB WHEEL LOADER W/FRONT BUCKET & DOZER	SLP41100YE0527687	0	DIESEL	70,520.38	09/25/00
94812 109	99 CHEV CREWCAB 1 TON PICKUP	1GCGC33F9XF061524	0	DIESEL	30,390.43	05/27/99
94812 111	92 CHEVY 3/4 TON PICK-UP TRUCK	1GBGK24J9NE194985	0	DIESEL	27,871.81	11/06/92
94822 108	94 TRUCK, GMC KODIAK 7CY	1GBP7HIJ3RJ104008	0	DIESEL	45,411.69	02/11/94
94822 109	95 TRUCK, INT'L 4700 2 1/2CY DUMP	LHTSCABL2SH658116	0	DIESEL	37,476.51	01/27/95
94822 110	97 INTERNATIONAL 2 1/2 CY DUMP TRUCK	LHTSCABL5VH453068	0	DIESEL	46,807.19	03/24/97
94822 112	04 TRUCK, PETERBUILT WATER TANKER	1NPLH28X95M852586	0	DIESEL	119,255.32	
94822 113	06 PETERBUILT DUMP TRUCK	2NPLH28X37M673737	0	DIESEL	119,353.59	
94842 108	93 TRACTOR, KUBOTA W/FLAIL MOWER	12944	0	DIESEL	18,499.60	03/19/93
94842 109	95 TRACTOR, JOHN DEERE W/EXT. FLAIL MOWER	157-1709-23666	0	DIESEL	45,458.25	08/16/95
94842 110	96 MORBARK TRAILER MOUNTED BRUSH CHIPPER	2771	0	DIESEL	24,656.33	12/20/96
94842 111	01 KUBOTA TRACTOR MOWER W/FLAIL MOWER	10775	0	DIESEL	74,873.28	11/01/01
94852 106	90 LOADER, BACKHOE JOHN DEERE W/BKT	T0310CF768260	0	DIESEL	36,180.00	01/01/90
94852 107	90 ROLLER, TANDEM CAT	06LF00285	0	DIESEL	21,013.01	05/31/90
94852 108	93 LOADER, KOMATSU FRONT END	12944	0	DIESEL	70,065.85	02/10/93
94852 109	94 GRADER, CHAMPION 710A	157-1709-23666	0	DIESEL	93,941.97	04/05/94
94852 110	92 SULLAIR AIR COMPRESSOR	004-137714	0	DIESEL	14,104.08	05/21/02
94852 111	88 FORKLIFT CAT V50D	3EC03766	0	DIESEL	4,583.30	09/12/88
94852 112	06 GMC FORWARD CAB W/SWEEPER	1GDM7F1306F431691	33,000	DIESEL	220,359.96	
94852 113	07 NH FRT LOADER/BACKHOE W/REAR BUCKET	031065320	0	DIESEL	70,720.00	
94862 105	88 FLOODLIGHT, WINCO MOUNT-ON TRAILER	44160J88	0	DIESEL	208.33	07/09/88
95812 180	94 TRUCK, CHEV FB 1TON	1GBHC34J3PE225142	0	DIESEL	34,994.00	03/31/94
95812 185	97 CHEV VAN	1GNHG35F1V1077787	0	DIESEL	24,488.78	06/18/97
95812 187	97 CHEV CREWCAB P/UP 1 TON W/UTL BODY	1GBHC33F6VF027336	0	DIESEL	28,988.36	06/18/97
95812 189	98 CHEV 1 TON CREWCAB PICK-UP TRUCK	1GCGC33FXWF061269	0	DIESEL	29,191.50	08/24/97
95812 190	98 CHEV 1 TON CREWCAB PICK-UP TRUCK	1GCGC33F2WF062545	0	DIESEL	29,191.50	08/24/97
95812 195	99 CHEVROLET VAN W/BUCKET HIGHLIFT	1GCHG39F3X1038172	0	DIESEL	51,462.00	01/27/99
95812 196	99 CHEV 1 TON FLATBED /HYDRAULIC LIFTGATE	1GBHC34F2XF008932	0	DIESEL	31,769.59	01/26/99
95812 204	99 CHEV 4X4 PICKUP TRUCK	1GCEK14V6XZ158439	0	DIESEL	23,973.80	06/22/99
95812 206	99 GMC TRUCK W/UTILITY BODY & CRANE	1GDHK34F7XF082678	0	DIESEL	49,346.96	02/07/00
95812 210	00 CHEV FLATBED 1 TON TRUCK	1GBHC34F9YF509589	0	DIESEL	33,853.95	10/23/00
95812 212	02 FORD F-350 UTILITY BOX W/RACK TRUCK	1FDSF30F82EC92916	0	DIESEL	34,644.66	02/28/03
95812 213	05 FORD EXCURSION SUV 4X4	1FMSU41P55EA25207	0	DIESEL	40,944.37	
95812 218	06 FORD F350 CREWCAB FLEETSIDE P-UP TRUCK	1FTWW30P56ED69925	0	DIESEL	37,455.00	
95812 219	06 FORD F350 CREWCAB FLEETSIDE P-UP TRUCK	1FTWW30P06ED69928	0	DIESEL	37,455.00	
95812 223	08 FORD F-350 FLEETSIDE PICK-UP	1FTWW30R98IC60405	10,800	DIESEL	42,466.95	
95822 123	84 TRUCK, FORD AERIAL PLATFORM	1FDXK74N0EVA05017	0	DIESEL	72,845.71	05/22/84
95822 133	93 TRUCK, INT'L 4700 STAKE DUMP	LHTSCPHL5PHA70644	0	DIESEL	42,318.47	09/17/92
95822 136	93 TRUCK, INT DUMP 7CY	LHTSDPCR6PH469513	0	DIESEL	46,157.69	11/24/92
95822 137	93 TRUCK, INT DUMP 7CY	LHTSDPCR8PH469514	0	DIESEL	46,157.69	11/24/92
95822 139	94 TRUCK, CHEVROLET 7CY DUMP	1GBP7H1J1R103701	0	DIESEL	45,203.27	03/25/94
95822 141	94 TRUCK, INT'L CREWCAB FLATBED	LHTSCACL2RH571311	0	DIESEL	46,504.96	05/11/94
95822 142	94 TRUCK, INT'L CREWCAB FLATBED	LHTSCACL4RH571312	0	DIESEL	46,504.96	05/11/94
95822 143	95 TANKER, GMC 2,000 GAL WT	1GDP7HLJ8RJ512351	0	DIESEL	65,910.40	01/12/95
95822 144	95 TANKER, GMC 2,000 GAL WT	1GDP7HLJ5RJ512338	0	DIESEL	65,910.40	01/12/95
95822 148	97 INTERNATIONAL 2 1/2 CY DUMP TRUCK	LHTSCABL3VH453067	0	DIESEL	46,598.86	03/24/97

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - MAUI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
95822 149	98 INTNL CREWCAB W/STAKE BODY AND DUMP	.HTSCAAL7WH496619	0	DIESEL	65,768.83	10/17/97
95822 150	98 INTERNATIONAL 7CY DUMP TRUCK	1HTSDADROVH496618	0	DIESEL	65,674.04	10/17/97
95822 151	98 INTERNATIONAL 7CY DUMP TRUCK	1HTSDADR6XH648999	0	DIESEL	66,748.77	11/24/98
95822 152	98 INTERNATIONAL 2 1/2 CY DUMP TRUCK	1HTSCABL6XH649040	0	DIESEL	51,106.70	11/24/98
95822 153	99 INTERNATIONAL 2 1/2 CY DUMP TRUCK	1HTSCAAN3XH212101	0	DIESEL	61,829.30	08/25/99
95822 154	99 INTERNATIONAL 2,000 GALS WATER TANK TRK	1HTSDADR8YH212155	0	DIESEL	108,561.57	10/01/99
95822 155	99 INT TRUCK W/BOOM CRANE	1HTGEATR2XH212154	0	DIESEL	128,328.92	12/29/99
95822 156	00 GMC W/DUMP CHIP BODY	1GDP7HLC6YJ519587	0	DIESEL	144,454.48	03/21/01
95822 157	94 TRUCK, INT'L 4700 2 1/2 CY DUMP	1HTSCABLXSH571306	0	DIESEL	35,588.74	06/17/94
95822 158	03 PETERBILT TRUCK W/ASPEN AERIAL BODY	1NFXOTXS3D714739	0	DIESEL	607,831.53	12/16/02
95822 159	02 CHEVROLET HD FLATBED W/TAILGATE	3GBKC34F52M116623	15,000	DIESEL	38,060.00	04/21/03
95822 160	02 CHEVROLET HD FLATBED W/TAILGATE	3GBKC34F52M116749	15,000	DIESEL	38,060.00	04/21/03
95822 161	91 MACK DUMP TRUCK 10 C. YD.	1M2AY80C5MM005596	56,540	DIESEL	68,348.13	01/07/91
95822 162	91 MACK DUMP TRUCK 10 C. YD.	1M2AY80C7MM005597	0	DIESEL	68,348.14	01/07/91
95822 163	04 PETERBUILT 7CY YD DUMP BODY TRUCK	2NPNH28XX4M816624	0	DIESEL	99,432.24	01/16/04
95822 164	96 TRUCK GMC FB (TOW TRUCK)	1GDM7H1J8RJ502423	32,000	DIESEL	80,861.00	01/07/96
95822 165	06 PETERBUILT MASTER TRUCK TRACTOR	LXPF40X67D673735	60,320	DIESEL	136,681.05	
95822 166	08 GMC TRUCK W/AERIAL AND UTILITY BODY	1GD85C1988F400866	0	DIESEL	144,603.64	
95842 145	95 WELDER, MILLER ON TRAILER	KE700622	0	DIESEL	9,533.35	09/19/94
95842 147	95 TRACTOR, JD W/FLAIL MOWER	LV5300D331852	0	DIESEL	33,905.23	03/17/95
95842 148	97 MORBARK CHIPPER	2770	0	DIESEL	24,656.33	12/20/97
95842 149	97 MORBARK CHIPPERS	2772	0	DIESEL	24,656.33	12/20/97
95842 154	98 KUBOTA TRACTOR W/REAR FLAIL MOWER	30371	0	DIESEL	18,056.41	08/06/98
95842 160	99 KUBOTA TRACTOR MOWER W/CAB	10564	0	DIESEL	35,029.10	11/30/99
95842 161	99 KUBOTA TRACTOR MOWER W/CAB	10562	0	DIESEL	60,899.68	01/30/99
95842 162	00 KUBOTA TRACTOR W/BOMFORD FLAIRMOWER	10712	0	DIESEL	65,204.45	01/24/01
95842 163	01 KUBOTA TRACTOR W/FLAIL MOWER	10776	0	DIESEL	41,416.79	10/31/01
95842 164	01 KUBOTA TRACTOR W/FLAIL MOWER	10777	0	DIESEL	41,416.78	10/31/01
95842 165	01 CASE TRACTOR MOWER/SICKLE BAR	JJE1018544	0	DIESEL	61,978.11	12/28/01
95842 168	02 CASE TRACTOR, SIDE MT, REAR FLAIL MOWER	JJE1020834	0	DIESEL	68,957.89	11/22/02
95842 169	02 CASE TRACTOR, SIDE MT, REAR FLAIL MOWER	JJE1020914	0	DIESEL	68,957.89	11/22/02
95842 170	02 CASE TRACTOR W/FRONT SWEEPER	JJE1020832	0	DIESEL	34,114.37	07/07/02
95842 175	03 ALLMAND NITE-LITE PRO	1315 PRO 03	0	DIESEL	7,960.16	11/05/03
95842 176	03 KUBOTA TRACTOR MOWER W/REAR FLAIL UNIT	11076	0	DIESEL	36,133.09	01/13/04
95842 177	03 KUBOTA TRACTOR MOWER W/REAR FLAIL UNIT	11078	0	DIESEL	37,633.10	01/13/04
95842 180	06 FORD NEW HOLLAND TRACTOR MOWER	HJS062649	0	DIESEL	68,749.56	
95842 181	06 CASE TRACTOR MOWER W/CAB	HFJ038649	0	DIESEL	44,270.55	
95852 112	81 GRADER, GALION MOTOR A-500 ARTICULATING	GF09544	0	DIESEL	80,477.00	08/26/80
95852 121	90 LOADER/BACKHOE 310C JD W/BKT	T0310CP768297	0	DIESEL	36,180.00	01/07/90
95852 122	90 COMPRESSOR, SULLAIR PORTABLE AIR	004104924	0	DIESEL	11,036.61	07/06/90
95852 124	93 LOADER, KOMATSU FRONT END	12942	0	DIESEL	70,065.85	02/10/93
95852 125	93 LOADER, KOMATSU FRONT END	12943	0	DIESEL	70,065.85	02/10/93
95852 126	93 GRADER, CHAMPION MOTOR 710A	157164523437	0	DIESEL	96,243.02	01/07/94
95852 127	93 GRADER, CHAMPION 710A MOTOR	157164323434	0	DIESEL	96,243.02	01/07/94
95852 128	94 GRADER, CHAMPION 710A MOTOR	157171023667	0	DIESEL	93,478.42	04/05/94
95852 129	97 FORD/ELGIN SWEEPER, 4-WHEEL	1FDXH81C1VVA10587	0	DIESEL	125,546.69	10/11/96
95852 130	97 CASE LOADER/BACKHOE 3WD W/EXTENDAHOE	JJG0239346	0	DIESEL	76,434.93	04/21/98
95852 131	98 LOADER FRONT END KOMATSU	A80257	0	DIESEL	91,780.41	09/29/98
95852 132	00 NEW HOLLAND BACKHOE/LOADER W/HAMMER	31025675	0	DIESEL	77,842.07	01/16/01
95852 133	02 GMC TRUCK SCHWARZE STREET SWEEPER	1GDP7C1C12J513643	0	DIESEL	173,680.16	12/10/02
95852 134	03 KOMATSU FORKLIFT	562457A	0	DIESEL	21,145.70	11/19/03

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS - MAUI DISTRICT OFFICE  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
95852 135	02 CASE WHEEL LOADER	JEE0135991	0	DIESEL	86,874.44	07/13/04
95852 136	04 CASE ROLLER DV202	DDD0000234	0	DIESEL	34,525.82	07/13/04
95852 137	06 GMC FORWARD CAB W/SWEEPER	1GDM7F1336F432110	33,000	DIESEL	219,109.96	
95852 138	06 PETERBUILT CAB CHASSIS W/VACUUM	1NPAL00X17D673738	66,000	DIESEL	326,148.08	
95852 140	07 NH FRT LOADER/BACKHOE W/REAR BUCKET	031065319	0	DIESEL	70,720.00	
					FUEL TYPE TOTAL	
95812 225	08 FORD F250 PICKUP K/CAB	1FTNX20548EC60408	0	PROPANE/GAS	42,978.92	
					FUEL TYPE TOTAL	
95842 152	96 VACCUM NILFISK GS/83	2100W	0	ELECTRIC	4,923.00	11/08/96
95842 155	98 AMERICAN ELECTRIC SIGN WITH TRAILER	1A9MS1517TA378127	0	ELECTRIC	32,925.89	09/04/98
95842 156	98 AMERICAN ELECTRIC SIGN WITH TRAILER	1A9MS1519TA378128	0	ELECTRIC	32,925.89	09/04/98
95842 158	99 ALLMAND ECLIPSE ARROW BOARDS	9907B407	0	ELECTRIC	6,483.21	08/27/99
95842 159	99 ALLMAND ECLIPSE ARROW BOARDS	9907B408	0	ELECTRIC	6,483.21	08/27/99
95842 166	02 SPEED CONTROL MONITOR W/TRAILER	40XX111S72A020005	2,000	ELECTRIC	11,999.00	06/19/02
95842 167	02 SPEED CONTROL MONITOR W/TRAILER	40XX111S92A020006	2,000	ELECTRIC	11,999.00	06/19/02
95842 171	02 ADDCO MID-SIZE MESSAGE BOARD-TRLR MTD	520280602	0	ELECTRIC	16,100.00	01/08/03
95842 172	02 ADDCO MID-SIZE MESSAGE BOARD-TRLR MTD	520270602	0	ELECTRIC	16,100.00	01/24/03
95842 173	02 ADDCO FULL SIZE MESSAGE BOARD- TRLR MTD	537603	0	ELECTRIC	25,300.00	01/24/03
95842 174	02 ADDCO FULL SIZE MESSAGE BOARD-TRLR MTD	537604	0	ELECTRIC	25,300.00	01/24/03
95842 178	96 ADDCO FULL SIZE MESSAGE BOARD	DH1000SN584985	3,700	ELECTRIC	37,000.00	
95842 179	98 AMERICAN SIGN SRS MESSAGE BOARD	1A9MS1515TA378126	2,950	ELECTRIC	32,920.00	
					FUEL TYPE TOTAL	
91832 127	00 ZIEMAN TRAILER (BORROW'G FROM HNL)	1ZC729B25PZP17467	0	NOT APPLICABLE	.00	
94832 104	90 TRAILER, ZIEMAN TILT BED	1ZCT18E19LZP15973	0	NOT APPLICABLE	6,765.84	07/23/90
94832 105	93 TRAILER, TRAIL KING TILT	1TKC02422NNM071620	0	NOT APPLICABLE	16,256.30	12/29/92
94832 106	06 TRAILER, LANDSCAPE UTILITY (MOLOKAI)		880	NOT APPLICABLE	3,541.68	
95832 109	96 TRAILER SCALE	1S9EC1615TH364446	0	NOT APPLICABLE	17,014.47	09/03/97
95832 110	99 TRAILER CHILTON	1FDAC0819XC000230	0	NOT APPLICABLE	13,667.00	12/17/99
95832 112	03 ZIEMAN FLATBED TILT TRAILOR	1ZCE18S203ZP24731	0	NOT APPLICABLE	7,291.62	11/05/03
95832 113	04 ZIEMAN TILT TRAILER	1ZCT20E213ZP24741	0	NOT APPLICABLE	6,817.67	07/13/04
95832 115	07 ZIEMAN FLATBED TILT TRAILER (BACON)	1ZCT21E2X7ZP27665	2,940	NOT APPLICABLE	11,856.00	
95842 184	08 SILENT MESSENGER BOARD	MB32248	0	NOT APPLICABLE	25,535.00	
					FUEL TYPE TOTAL	



Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
91812 343	86 TRUCK: FORD RANGER PICKUP	1FTBR10T1GUC95174	0	GASOLINE	8,404.65	07/01/86
91812 348	87 VAN: FORD E150 CLUBWAGON	1FMRE11HXHBB41247	0	GASOLINE	15,226.09	
91812 368	88 TRUCK: CHEVY FLEETSIDE PICKUP	1GCCG34K1JE208184	0	GASOLINE	14,078.62	09/04/88
91812 371	86 TRUCK: CHEVY PICKUP	1GCCDC14H9GJ119460	0	GASOLINE	5,925.00	08/01/88
91812 376	89 TRUCK: DODGE D350 RAM FLATBED	1B6ME3650KS042168	0	GASOLINE	25,402.60	03/01/89
91812 378	87 SEDAN: CHEV CAVALIER	1G1JCS110HK140543	0	GASOLINE	5,850.00	04/01/89
91812 381	89 TRUCK: GMC S15 PICKUP	1GTCSS19Z5K8528099	0	GASOLINE	11,487.87	06/01/89
91812 385	88 WAGON: TOYOTA LAND CRUISER STATION	JT3FJ62G8J0090489	0	GASOLINE	12,069.79	09/01/89
91812 389	90 VAN: DODGE B350 RAM	2B4KB35Z8LK766974	0	GASOLINE	19,333.07	07/01/90
91812 391	07 SEDAN: CHEV LU	2G1WL54TXL9235401	0	GASOLINE	12,367.83	07/23/90
91812 393	90 SEDAN: CHEV LUMINA	2G1WL54T2L9239149	0	GASOLINE	12,367.83	07/01/90
91812 396	91 TRUCK: CHEVY BLAZER	1GNCS18Z7M0120262	0	GASOLINE	13,936.96	07/01/90
91812 398	90 TRUCK: FORD F350 CREWCAB PICKUP	2FTJW35HXKCA97059	0	GASOLINE	18,518.81	07/01/90
91812 402	91 TRUCK: CHEV S-10 PICKUP	1GCCS19Z3M8133650	0	GASOLINE	11,871.03	07/01/90
91812 407	88 TRUCK: FORD F150 PICKUP	1FTDF15Y1JPA33828	0	GASOLINE	5,500.00	08/01/90
91812 408	88 SEDAN: FORD TEMPO GL	1FAPP36XXJK107875	0	GASOLINE	3,000.00	08/01/90
91812 409	84 VAN: DODGE RAM 250	2B4HB21H8EK265362	0	GASOLINE	1,300.00	
91812 410	85 VAN: CHEVY G20	1G8EG25N3F7167870	0	GASOLINE	1,300.00	
91812 418	91 TRUCK: CHEV S-10 PICKUP	1GCCS19Z6M2301283	0	GASOLINE	12,175.00	
91812 420	01 TRUCK: CHEV SUBURBAN 4 WD	1GNV26K7MF138634	0	GASOLINE	19,589.00	07/22/91
91812 425	91 SEDAN: DODGE DYNASTY	1B3XC46R7MD259412	0	GASOLINE	12,434.48	09/01/91
91812 426	91 VAN: CHEVY ASTRO	1GNDM19Z6MB212142	0	GASOLINE	17,437.00	10/14/91
91812 432	92 TRUCK: SONOMA S19Z PICKUP	1GTCSS19ZKN8515479	0	GASOLINE	11,965.00	05/01/92
91812 435	92 TRUCK: CHEV SUBURBAN 4 WD W/AIR	1GNCK26KXNJ334148	0	GASOLINE	21,875.07	07/01/92
91812 436	92 TRUCK: CHEV SUBURBAN 4 WD W/AIR	1GNCK26K5NJ334854	0	GASOLINE	21,875.07	07/01/92
91812 437	92 TRUCK: CHEV SUBURBAN 4 WD W/AIR	1GNCK26K3NJ335839	0	GASOLINE	21,875.07	07/01/92
91812 438	92 SUBURBAN: CHEV 4W/D W/AIR	1GNCK26K1NJ340876	0	GASOLINE	21,875.07	07/01/92
91812 440	92 SUBURBAN: CHEV 4W/D W/AIR	1GNCK26K1NJ341476	0	GASOLINE	21,875.07	07/01/92
91812 441	92 SUBURBAN: CHEV 4W/D W/AIR	1GNCK26K9NJ341354	0	GASOLINE	21,875.07	07/01/92
91812 443	92 VAN: CHEVY SPORT	2GNDG15K7N4164196	0	GASOLINE	16,602.59	08/01/92
91812 445	92 TRUCK: CHEV CREWCAB PICKUP	1GCCG33K6NJ350383	0	GASOLINE	19,962.98	12/01/92
91812 449	93 TRUCK: FORD F150 PICKUP	1FTDF15Y2PLA66160	0	GASOLINE	10,365.84	05/18/93
91812 450	93 TRUCK: FORD F150 PICKUP	1FTDF15Y4PLA66161	0	GASOLINE	10,369.84	04/01/93
91812 451	93 TRUCK: FORD F150 PICKUP	1FTDF15Y6PLA66162	0	GASOLINE	10,369.84	04/01/93
91812 452	93 TRUCK: FORD F150 PICKUP	1FTDF15Y8PLA66163	0	GASOLINE	10,369.84	04/01/93
91812 453	93 TRUCK: FORD F15 PICKUP	1FTDF15Y5PLA66167	0	GASOLINE	10,853.44	04/01/93
91812 454	93 VAN: FORD AEROSTAR	1FMCAL1U1PZB27844	0	GASOLINE	13,801.84	05/01/93
91812 455	93 VAN: FORD AEROSTAR	1FMCAL1U5PZB27846	0	GASOLINE	14,351.00	05/01/93
91812 458	93 STATION WAGON: FORD TAURUS	1FACP57UXPG245846	0	GASOLINE	13,488.80	05/01/93
91812 459	93 SEDAN: CHEVROLET LUMINA 4 DR	2G1WL54T3P9206344	0	GASOLINE	11,890.70	05/01/93
91812 460	93 SEDAN: CHEVROLET LUMINA 4DR	2G1WL54T1P9204866	0	GASOLINE	11,890.70	05/01/93
91812 461	93 SEDAN: CHEVROLET LUMINA 4 DR	2G1WL54T8P9205142	0	GASOLINE	11,890.70	05/01/93
91812 462	93 SEDAN: CHEVROLET LUMINA 4 DR	2G1WL54T0P9208147	0	GASOLINE	11,916.75	05/01/93
91812 468	93 TRUCK: FORD RANGER PICKUP	1FTCR10X7PUC48338	0	GASOLINE	11,059.36	07/01/93
91812 472	93 TRUCK: FORD RANGER PICKUP	1FTCR10A1PUC48332	0	GASOLINE	9,393.28	05/01/93
91812 475	93 TRUCK: FORD RANGER PICKUP	1FTCR10A7PUC48315	0	GASOLINE	9,393.28	05/01/93
91812 477	93 SEDAN: CHEV CAVALIER 4DSD	1G1JCS443P7315150	0	GASOLINE	8,888.00	08/01/93
91812 480	93 SEDAN: CHEV CAVALIER 4DSD	1G1JCS441P7317057	0	GASOLINE	8,888.00	08/01/93
91812 481	93 SEDAN: CHEV CAVALIER 4DSD	1G1JCS443P7318341	0	GASOLINE	8,888.00	08/01/93
91812 482	93 SEDAN: CHEV CAVALIER 4DSD	1G1JCS44XP7319129	0	GASOLINE	9,663.00	08/01/93
91812 483	93 SEDAN: CHEV CAVALIER 4DSD	1G1JCS445P7319183	0	GASOLINE	8,888.00	08/01/93

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
91812 484	93 SEDAN: CHEV CAVALIER 4DSD	1G1JC5441P7325708	0	GASOLINE	8,888.00	08/01/93
91812 485	93 SEDAN: CHEV CAVALIER 4DSD	1G1JC5445P7336940	0	GASOLINE	8,888.00	08/01/93
91812 487	93 SEDAN: CHEV CAVALIER	1G1JC5446P7339197	0	GASOLINE	8,888.00	08/01/93
91812 488	93 TRUCK: GMC SUBURBAN 4WD	1GKGG26K1PJ746057	0	GASOLINE	22,422.59	08/01/93
91812 489	94 TRUCK: CHEV S-10 PICKUP	1GCCS1441R8180629	0	GASOLINE	10,554.48	06/01/94
91812 491	94 TRUCK: CHEV S-10 PICKUP	1GCCS1441R8178587	0	GASOLINE	10,553.40	06/01/94
91812 492	94 TRUCK: CHEV S-10 PICKUP (EXCH FOR 464)	1GCCS1444R8178969	0	GASOLINE	10,554.49	06/01/94
91812 493	94 TRUCK: CHEV S-10 PICKUP	1GCCS1444R8178794	0	GASOLINE	10,553.40	06/01/94
91812 494	94 TRUCK: CHEV S-10 PICKUP	1GCCS1444R8180074	0	GASOLINE	10,553.40	06/01/94
91812 496	94 TRUCK: CHEVY S-10 PICKUP	1GCCS1449R8180068	0	GASOLINE	10,553.40	06/01/94
91812 500	94 SEDAN: OLDSMOBILE CUTLASS CIERA (EXC 456)	1G3AG55M5R6397806	0	GASOLINE	13,027.13	06/01/94
91812 501	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AG55M3R6397822	0	GASOLINE	13,130.25	06/01/94
91812 502	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M4R6402884	0	GASOLINE	13,832.34	06/01/94
91812 503	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M6R6398806	0	GASOLINE	13,931.29	06/01/94
91812 504	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M1R6399216	0	GASOLINE	13,931.29	06/01/94
91812 505	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M0R6399238	0	GASOLINE	13,906.30	06/01/94
91812 506	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M6R6400845	0	GASOLINE	13,906.30	06/01/94
91812 507	94 STA WGN: OLDSMOBILE CUTLASS CRUISER	1G3AJ85M5R6400707	0	GASOLINE	13,931.29	06/01/94
91812 508	94 TRUCK: CHEVROLET 1/2 TON PICKUP (EXCH 449)	1GCCDC14H1RZ217659	0	GASOLINE	13,667.77	06/01/94
91812 511	94 TRUCK: CHEVROLET 1/2 TON PICKUP	1GCCDC14H8RZ217738	0	GASOLINE	13,666.77	06/01/94
91812 512	94 VAN: GMC SAFARI	1GKDM15Z1R542846	0	GASOLINE	15,072.96	08/01/94
91812 513	94 VAN: GMC SPORT RALLY	1GKEG25H3RF532871	0	GASOLINE	16,144.84	06/01/94
91812 514	94 STATION WAGON: CHEVROLET CAVALIER	1G1JC8445R7317633	0	GASOLINE	11,859.15	06/01/94
91812 517	94 TRUCK: CHEV PICKUP W/ SKID TRAILER	1GCCG33NORJ408472	0	GASOLINE	22,682.00	11/01/94
91812 518	94 TRUCK: GMC SIERRA CLUB COUPE	1GTHK39F4RE503732	0	GASOLINE	143,457.00	09/01/95
91812 519	85 TRUCK: CHEV 4WD P/U-MILITARY	1GCCD34J2FF434840	0	GASOLINE	1,600.00	08/01/96
91812 520	85 TRUCK: CHEV 4WD P/U-MILITARY	1GCHD34J0FF444366	0	GASOLINE	1,600.00	08/01/96
91812 521	84 TRUCK: CHEV. PICKUP	1GCHD34J6EF357800	0	GASOLINE	1,600.00	
91812 528	97 TRUCK: CHEV S-10 EXT CAB PICKUP CHEYENNE	1GCCS19X1VK179464	0	GASOLINE	17,015.61	04/01/97
91812 529	97 TRUCK: CHEV S-10 EXT CAB PICKUP CHEYENNE	1GCCS19X2VK179571	0	GASOLINE	17,015.61	04/01/97
91812 530	97 TRUCK: CHEV S-10 EXT CAB PICKUP CHEYENNE	1GCCS19X0VK179665	0	GASOLINE	17,015.61	04/01/97
91812 531	97 TRUCK: CHEV S-10 EXT CAB PICKUP CHEYENNE	1GCCS19X4VK179622	0	GASOLINE	17,171.86	04/01/97
91812 532	97 TRUCK: CHEV S-10 PICK UP	1GCCS14X7V8169705	0	GASOLINE	14,648.95	05/01/97
91812 533	97 TRUCK: CHEV S-10 PICK UP	1GCCS14X3V8170558	0	GASOLINE	14,648.95	05/01/97
91812 534	97 TRUCK: CHEV S-10 PICKUP	1GCCS14X9V8169690	0	GASOLINE	14,648.95	05/01/97
91812 535	97 TRUCK: CHEV S-10 PICKUP	1GCCS14X2V8169854	0	GASOLINE	14,648.95	05/01/97
91812 536	97 TRUCK: CHEV S-10 PICKUP	1GCCS14X7V8168862	0	GASOLINE	14,648.95	05/01/97
91812 538	97 TRUCK: CHEV 1/2 TON PICKUP	1GCCE14M0VZ216420	0	GASOLINE	19,269.78	06/01/97
91812 539	85 TRUCK: CHEVROLET PICK UP	1GCCD34J2FF425426	0	GASOLINE	1,600.00	04/01/97
91812 540	85 TRUCK: CHEVROLET PICKUP	1GCCD34J5FF425498	0	GASOLINE	1,600.00	04/01/97
91812 541	85 TRUCK: CHEVROLET PICKUP	1GCCD34JXFF426761	0	GASOLINE	1,600.00	04/01/97
91812 542	86 TRUCK: CHEV 4WD P/U- MILITARY	1GCCD34J0GF362375	0	GASOLINE	1,600.00	06/01/97
91812 544	97 VAN: FORD ECONOLINE	1FTHE242XVHB09473	0	GASOLINE	20,000.00	06/01/97
91812 545	97 VAN: FORD ECONOLINE	1FTHE2421VHB09474	0	GASOLINE	20,000.00	06/01/97
91812 546	97 VAN: FORD ECONOLINE	1FTHE2423VHB09475	0	GASOLINE	20,000.00	06/01/97
91812 547	96 TRUCK: TOYOTA PICK UP	4TAWN72NXTZ103533	3,670	GASOLINE	15,171.04	06/01/96
91812 548	96 TRUCK: TOYOTA PICK UP	4TAWN72NXTZ118386	3,670	GASOLINE	15,171.04	06/01/96
91812 549	92 STATION WAGON TOYOTA 4DR LAND CRUISER	JT3FJ80W3N0044046	4,700	GASOLINE	.00	06/01/92
91812 553	98 BLAZER CHEVROLET 4 DR	1GNCS13WXWK245714	0	GASOLINE	23,951.93	06/01/98
91812 554	92 WAGON: FORD EXPLORER STATION WAGON	1FMD432X1NUC59187	0	GASOLINE	.00	06/01/92
91812 556	98 SEDAN: CHEVROLET CAVALIER 4 DR.	3G1JC5243WS862406	0	GASOLINE	17,807.18	06/01/98

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION----- COST	DATE
91812 564	95 SEDAN: CHEVROLET CORSICA 4 DR.	1G1LD55M7SY271838	0	GASOLINE	6,100.00	06/01/95
91812 565	95 SEDAN: CHEVROLET CORSICA 4 DR.	1G1LD558M6SY273323	0	GASOLINE	6,100.00	06/01/95
91812 566	95 SEDAN: CHEVROLET CORSICA 4 DR.	1G1LD55M4SY284594	0	GASOLINE	6,100.00	06/01/95
91812 567	95 SEDAN: CHEVROLET CAPRICE 4DR.	1G1BL52W0SR163723	0	GASOLINE	11,900.00	06/01/95
91812 569	98 TRUCK: FORD RANGER	1FTZR15U4WPA05345	0	GASOLINE	.00	06/01/98
91812 570	98 TRUCK: FORD RANGER	1FTZR15U8WPA05347	0	GASOLINE	.00	06/01/98
91812 571	98 TRUCK: FORD MPVH EXPLORER	1FMZU34E9WUA20005	0	GASOLINE	.00	06/01/98
91812 575	98 TRUCK: FORD RANGER PICK UP	1FTZR15U6WPA05346	0	GASOLINE	.00	06/01/98
91812 578	95 SEDAN: FORD TAURUS 4 DR.	1FALP52U1SA230476	0	GASOLINE	6,500.00	06/01/95
91812 579	00 VAN: CHEVROLET ASTRO	1GNDM19W1YB181166	0	GASOLINE	108,100.00	06/01/00
91812 580	00 WAGON: JEEP CHEROKEE MPVH 4 DR.	1J4FT28S2YL208971	0	GASOLINE	25,030.05	06/01/00
91812 581	00 SEDAN: CHEVROLET 4 DR. MALIBU	SN1G1ND52J9Y6256443	0	GASOLINE	17,485.30	06/01/00
91812 582	00 TRUCK: GMC S-15 PU	1GTDPT19W0Y8267907	0	GASOLINE	1.00	06/01/00
91812 583	00 TRUCK: GMC 2-15 PU	1GTDPT19W0Y8270039	0	GASOLINE	1.00	06/01/00
91812 584	93 TRUCK: DODGE PICKUP D250 RAM	1B7JE26X5PS257238	0	GASOLINE	5,900.00	06/01/93
91812 595	01 SEDAN: CHEVROLET 4 DOOR IMPALA	2G1WF55E919344274	4,423	GASOLINE	21,025.00	06/01/01
91812 610	95 SEDAN: FORD TAURUS 4 DR	1FALP524XSA230475	3,220	GASOLINE	.00	06/01/95
91812 637	04 TRUCK DODGE DAKOTA 4DR	1D7HG38K845718546	0	GASOLINE	22,859.23	12/09/04
91812 655	05 TRUCK: DODGE F1500 PICKUP	1D7HA16N15J604298	0	GASOLINE	23,352.98	09/29/05
91812 674	05 SUV: FORD EXPLORER	1FMZU62K45UB86599	0	GASOLINE	23,176.93	12/30/05
91812 676	05 TRUCK: FORD RANGER PU	1FTYR44U25PA81711	0	GASOLINE	21,195.80	12/30/05
91812 678	02 SEDAN: OLDSMOBILE ALERO	1G3NLS2F82C255380	0	GASOLINE	7,150.00	03/13/07
91812 679	02 SEDAN: OLDSMOBILE ALERO	1G3NLS2F52C244403	0	GASOLINE	7,150.00	03/13/07
91812 680	02 SEDAN: OLDSMOBILE ALERO	1G3NLS2F92C244324	0	GASOLINE	7,150.00	03/13/07
91812 691	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14506LA83463	0	GASOLINE	37,117.26	01/22/07
91812 692	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14596LA83462	0	GASOLINE	37,117.26	01/22/07
91812 693	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14576LA83461	0	GASOLINE	37,117.26	01/05/07
91812 694	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14596LA83459	0	GASOLINE	37,117.26	01/05/07
91812 695	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14526LA83464	0	GASOLINE	37,117.26	01/22/07
91812 696	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14576LA83458	0	GASOLINE	37,117.26	01/22/07
91812 697	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14556LA83460	0	GASOLINE	37,117.26	01/22/07
91812 698	06 SUV FORD EXPEDITION XLS 4X4	1FMPU14546LA83465	0	GASOLINE	37,117.26	01/22/07
91812 707	08 TRUCK 07 F150 W/LIFT GATE	1FTRF12VX7KD42204	0	GASOLINE	40,702.47	03/14/08
91812 710	08 SUV FORD EXPEDITION 1FMFK16558LA08808	1FMFK16558LA08808	0	GASOLINE	41,086.76	04/21/08
91812 712	08 SUV 08 FORD EXPLORER 4X4	1FMEU73E08UA15852	0	GASOLINE	30,756.92	05/12/08
91812 714	08 SUV FORD EXPLORER SPORT UTILITY 4X4	1FMEU73E98UA15851	0	GASOLINE	30,756.42	05/28/08
91822 163	81 FORKLIFT: TOYOTA	2FG3020424	0	GASOLINE	17,115.00	06/01/81
91822 196	92 FORKLIFT: YALE FORKLIFT TRUCK	N523949	0	GASOLINE	20,046.00	09/01/92
91822 220	94 TRUCK: GMC	1GDM7H1J3R502423	32,000	GASOLINE	80,861.00	09/01/95
91822 221	94 TRUCK: GMC	1GDM7H1J3R501258	32,000	GASOLINE	80,861.00	09/01/95
91822 225	77 FORKLIFT: ALIS CHALMERS ACC-40B PS	102882	0	GASOLINE	900.00	06/01/77
91822 229	77 FORKLIFT: ALLISCHALMERS ACC-40BPS	102871	0	GASOLINE	1,500.00	06/01/77
91842 169	84 KELLY-CRESWELL STRIPING MACHINE	3623	0	GASOLINE	9,994.40	11/01/84
91842 172	86 MB STRIPING MACHINE	3-0584	0	GASOLINE	2,784.09	06/01/86
91842 196	90 MOWER: CUBCADET POWER	000189371	0	GASOLINE	3,593.76	08/01/90
91842 202	91 MOWER: SNAPPER POWER	05077521	0	GASOLINE	2,698.80	06/01/91
91842 214	94 MACHINE STRIPING KELLY CRESWELL	KCB42T	0	GASOLINE	19,344.11	02/01/94
91842 229	96 GENERATOR, HONDA GA-6HZ	5131560	0	GASOLINE	2,945.00	12/01/96
91842 235	96 MIXER, BETONIERA WORKMAN 250 CONCRETE	123789	0	GASOLINE	2,442.96	01/01/98
91842 239	98 STRIPING MACHINE KELLY CRESWELL HDCT-2	8007	0	GASOLINE	17,290.70	06/01/98
91842 263	99 STRIPING MACHINE: MB W/POWER DRIVE 5-12	399041271	0	GASOLINE	11,467.00	06/01/99

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
91842 276	03 TRAILER: SPECTRUM W/CHEM SPRAYER TANK	159ES16163H364226	0	GASOLINE	.00	06/01/97
91842 277	00 STRIPING MACHINE: KELLY CRESWELL HDCT	SN8173	0	GASOLINE	13,956.72	06/01/97
91842 278	00 STRIPING MACHINE: KELLY CRESWELL HDCT	8174	0	GASOLINE	13,956.72	06/01/97
91842 300	03 STRIPING MACHINE: KELLY CRESWELL B4-2T	8377	0	GASOLINE	29,725.14	10/30/03
91842 312	06 WELDER LINCOLN 10KW K2468-1	159ES14146H364223	0	GASOLINE	31,340.00	05/01/07
91842 314	06 GENERATOR HONDA EB7000I	EAKJ1002570	0	GASOLINE	6,495.00	02/16/07
91842 316	06 ERADICATOR ROBIN MOD 20H W/VACUUM		0	GASOLINE	9,979.98	02/16/07
91842 317	06 WELDER LINCOLN 06 K2468-1	9ES14166H364224	0	GASOLINE	31,340.00	05/01/07
91842 318	06 GENERATOR BRIGGS & STRATTON MOD 030242	1013892078	0	GASOLINE	2,548.08	02/16/07
91842 320	08 SPRAYER 06 TRAILER MTD MCGREGOR EQMR-300	RS335707	0	GASOLINE	25,812.33	09/07/07
91862 106	87 ADVANCE INDUSTRIAL SWEEPER	215714	2,960	GASOLINE	18,705.15	07/01/87
91862 111	99 VACUUM: TENNANT LITTER MACHINE	4300-1132	2,600	GASOLINE	29,421.21	04/01/99
91862 112	00 TRUCK: TENNANT LITTER MACH (VACUUM) ATLV	4300-1437	0	GASOLINE	26,562.33	03/31/00
91862 119	06 FORKLIFT KOMATSU FG30HT-14	204327A	0	GASOLINE	30,728.97	02/13/07
					FUEL TYPE TOTAL	
91812 522	97 TRUCK: CHEV CREW CAB PICK UP CHEYENNE	1GCGC33F0VF028201	0	DIESEL	27,121.70	06/01/97
91812 523	97 TRUCK: CHEV CREWCAB PICKUP	1GCGC33F4VF028153	0	DIESEL	27,121.70	04/01/97
91812 524	97 TRUCK: CHEV CREWCAB PICKUP	1GCGC33F8VF028205	0	DIESEL	27,121.70	04/01/97
91812 525	97 TRUCK: CHEV PICKUP CHEYENNE	1GCGC33F0VF027212	0	DIESEL	27,121.70	04/01/97
91812 526	97 TRUCK: CHEV CREWCAB PICKUP CHEYENNE	1GCGC33F7VF027398	0	DIESEL	27,121.70	04/01/97
91812 527	97 TRUCK: CHEV CREWCAB PICKUP	1GCGC33F8VF027488	0	DIESEL	26,600.88	04/01/97
91812 543	97 VAN: CHEVROLET W/TELESCOPIC AERIAL LIFT	1GCHG39F0V1053533	9,500	DIESEL	50,770.80	06/01/97
91812 550	98 TRUCK: CHEVROLET CREW CAB PICKUP	1GCGC33F5WF061065	0	DIESEL	31,621.33	06/01/98
91812 551	98 TRUCK: CHEVROLET CREW CAB PICKUP	1GCGC33F5WF061549	0	DIESEL	31,828.68	06/01/98
91812 552	98 TRUCK: CHEVROLET CREW CAB PICKUP	1GCGC33F0WF061927	0	DIESEL	31,829.66	06/01/98
91812 555	99 TRUCK: GMC UTILITY CREW CAB	1GDHK33FOX006639	10,000	DIESEL	76,347.44	06/01/99
91812 557	99 TRUCK: CHEVROLET SUBURBAN 4X4	3GNGK26F8XG206132	0	DIESEL	33,848.74	06/01/99
91812 558	99 TRUCK: GMC SIERRA CREW CAB	1GTHC33F9XF012988	0	DIESEL	41,843.36	06/01/99
91812 559	99 TRUCK: GMC SIERRA CREW CAB	1GTHC33F9XF013235	0	DIESEL	41,843.36	06/01/99
91812 560	99 TRUCK: CHEVROLET FLEETSIDE CREWCAB P/U	1GCGC33F7XF060677	0	DIESEL	32,011.25	06/01/99
91812 561	99 TRUCK: CHEVROLET FLEETSIDE CREWCAB P/U	1GCGC33F3XF059719	0	DIESEL	32,115.42	06/01/99
91812 562	99 TRUCK: GMC SIERRA CREW CAB	1GTHC33F1XF010491	10,000	DIESEL	41,843.36	06/01/99
91812 577	00 TRUCK: GMC UTILITY BODY	1GDHC34F3YP415392	10,000	DIESEL	45,694.48	06/01/00
91812 585	00 TRUCK: GMC 3500 SIERRA CREWCAB PICKUP	1GTGC33FOYF496692	9,000	DIESEL	33,906.03	06/01/00
91812 586	01 TRUCK: GMC 2500HD P/U	1GTHC24101E216685	9,200	DIESEL	33,246.44	06/01/01
91812 587	01 TRUCK: GMC 2500 HD P/U W/ARROW BOARD	1GTHC24111E216114	9,200	DIESEL	35,423.92	06/01/01
91812 588	01 TRUCK: GMC 2500 HD P/U W/LIFT GATE	1GTHC24171E218322	9,200	DIESEL	35,605.21	06/01/01
91812 594	01 TRUCK: GMC STAKE W/LIFT GATE	1GDJC34171F141030	11,400	DIESEL	41,569.91	06/01/01
91812 596	01 TRUCK: FORD PICKUP W/EXT. CAB ONE TON	1FTWX32F41EC51441	11,000	DIESEL	32,714.45	06/01/01
91812 597	01 TRUCK: FORD PICKUP W/EXT CAB ONE TON	1FTWX32F61EC51442	11,000	DIESEL	32,714.45	06/01/01
91812 598	01 TRUCK: FORD PICKUP W/EXT CAB ONE TON	1FTWX32F81EC51443	11,000	DIESEL	32,714.45	06/01/01
91812 599	01 TRUCK: FORD PICKUP W/EXT CAB ONE TON	1FTWX32F41EC51444	11,000	DIESEL	32,714.45	06/01/01
91812 600	01 TRUCK: FORD PICKUP W/EXT CAB ONE TON	1FTWX32F11EC51445	11,000	DIESEL	32,714.25	06/01/01
91812 601	01 TRUCK: FORD P/U ONE TON W/EXTENDED CAB	1FTWX32F21EC51440	11,000	DIESEL	32,714.45	06/01/01
91812 602	01 TRUCK: FORD ONE TON P/U W/EXTENDED CAB	1FTWX32F31EC51446	11,000	DIESEL	32,610.44	06/01/01
91812 603	01 TRUCK: FORD P/U ONE TON W/EXTENDED CAB	1FTWX32F51EC51447	11,000	DIESEL	32,610.44	06/01/01
91812 605	01 TRUCK: FORD CREW CAB PICK UP	1FTWX32F51EC84032	11,000	DIESEL	35,510.40	06/01/01
91812 606	01 TRUCK: GMC PICK UP	1GTHC24161E316693	9,200	DIESEL	33,246.44	06/01/01
91812 607	01 TRUCK: FORD ONE TON UTILITY PICKUP	1FDWF32P51EC47610	11,000	DIESEL	35,349.81	06/01/01
91812 608	01 TRUCK: FORD ONE TON UTILITY PICKUP	1FDWF32P91EC47609	11,000	DIESEL	35,349.81	06/01/01

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
91812 609	01 VAN: CHEVROLET FULL SIZE MODEL 3500	1GAHG35F611235570	9,500	DIESEL	30,117.00	06/01/01
91812 611	01 TRUCK: GMC W/AERIAL	3GDKC34F41M115307	15,000	DIESEL	98,393.22	03/27/02
91812 613	02 TRUCK: FORD ONE TON PU W/EXT. CAB	1FTWX32FX2EC50960	11,500	DIESEL	32,736.18	08/23/02
91812 614	02 TRUCK: FORD ONE TON PU W/EXT. CAB	1FTWX32F12EC50961	11,500	DIESEL	32,736.18	08/23/02
91812 615	02 TRUCK: FORD ONE TON PU W/EXT. CAB	1FTWX32F32EC50962	11,500	DIESEL	32,736.18	08/23/02
91812 616	02 TRUCK: FORD ONE TON PU W/EXT. CAB	1FTWX32F52EC50963	11,500	DIESEL	32,736.18	08/23/02
91812 617	02 TRUCK: FORD ONE TON PU W/EXT. CAB	1FTWX32F72EC50964	11,500	DIESEL	32,736.18	08/23/02
91812 620	02 VAN: CHEV 3500 FULL SIZE	1GNHG35F721243001	9,500	DIESEL	27,785.00	09/12/02
91812 621	02 VAN: CHEV. 3500 15 PASSENGER	1GAHG39F651243664	9,500	DIESEL	28,925.00	09/12/02
91812 622	03 TRUCK: FORD 4DR EXCURSION MPVH	1FMSU41P03ED13424	7,650	DIESEL	39,993.77	12/08/03
91812 623	03 TRUCK: FORD EXCURSION 4 DR MPVH	1FMSU41P43ED13426	7,650	DIESEL	39,993.77	12/08/03
91812 624	03 TRUCK: FORD 4DR EXCURSION MPVH	1FMSU41P63ED13427	7,650	DIESEL	39,993.77	12/08/03
91812 625	03 TRUCK: FORD 350 PICKUP W/CREW CAB	1FTWW32P53ED35668	11,500	DIESEL	36,186.18	12/08/03
91812 629	04 TRUCK: FORD EXCURSION 4X4 SPORT UTIL.	1FMSU41P94ED77883	0	DIESEL	40,060.64	11/18/04
91812 630	04 TRUCK: CHEV CREWCAB F350 4X2	1FTWW32P94ED29681	0	DIESEL	32,609.15	11/16/04
91812 631	04 TRUCK: FORD F350 CREW CAB	1FTWW32P04ED29682	0	DIESEL	32,609.15	11/16/04
91812 632	04 TRUCK: FORD 4X2 CREW CAB	1FTWW32P24ED29683	0	DIESEL	32,609.14	11/16/04
91812 633	04 TRUCK: FORD F350 CREWCAB	1FTSF30P84ED37126	0	DIESEL	30,848.43	11/16/04
91812 646	04 TRUCK: FORD F350 PICKUP	1FTWF32P84EE0972	6,640	DIESEL	29,107.05	08/10/05
91812 647	04 TRUCK: FORD F350 PICKUP	1FTSF31P64EE09701	0	DIESEL	31,165.37	09/09/05
91812 648	05 VAN: FORD E350	1FMNE31P45HA02083	0	DIESEL	29,407.10	08/17/05
91812 649	05 VAN: FORD E350	JFMNE31P65HA02084	0	DIESEL	29,407.11	08/17/05
91812 662	06 TRUCK: FORD PU	1FTSF30P46EA19555	0	DIESEL	29,770.77	12/29/05
91812 663	06 TRUCK: FORD PU	1FTSF30P66EA19556	0	DIESEL	29,770.77	12/29/05
91812 664	06 TRUCK: FORD PU	1FTSF30P86EA19557	0	DIESEL	29,770.77	12/29/05
91812 665	06 TRUCK: FORD PU	1FTSF30PX6EA19558	0	DIESEL	29,770.77	12/29/05
91812 666	06 TRUCK: FORD PU	1FTSF30P16EA19559	0	DIESEL	29,770.77	12/29/05
91812 667	06 TRUCK: FORD PU	1FTSF30P86EA19560	0	DIESEL	29,770.77	12/29/05
91812 668	06 TRUCK FORD PU	1FTSF30PX6EA19561	0	DIESEL	29,770.74	12/30/05
91812 669	06 TRUCK: FORD PU F350	1FTSF30P16EA19562	0	DIESEL	29,770.77	12/29/05
91812 670	06 TRUCK: FORD PU	1FTSF30P36EA19563	0	DIESEL	29,770.77	12/29/05
91812 671	06 TRUCK: FORD PU	1FTSF30P56EA19564	0	DIESEL	29,770.77	12/29/05
91812 672	06 TRUCK: FORD PU	1FTSF30P76EA19565	0	DIESEL	29,770.77	12/29/05
91812 673	06 TRUCK: FORD PU	1FTSF30P75ED36700	0	DIESEL	29,770.77	12/29/05
91812 677	06 TRUCK FORD F350 PU W/LIFT GATE	1FTWF30P96EA26082	0	DIESEL	36,706.92	02/23/06
91812 702	06 TRUCK FORD 06 F350 PU	1FTWF30P66ED69920	0	DIESEL	30,931.75	04/21/07
91812 703	06 TRUCK FORD F350 PU	1FTWF30P66ED69917	0	DIESEL	30,931.75	04/19/07
91812 704	06 TRUCK FORD F350 PU	1FTWF30P56ED69908	0	DIESEL	30,931.75	04/19/07
91812 705	07 TRUCK FORD 06 F350 PU	TWF30P66ED69898	0	DIESEL	30,931.75	04/19/07
91812 706	06 TRUCK FORD F350	1FDWF30P66ED72523	0	DIESEL	35,603.52	07/17/07
91822 176	86 TRUCK: INT'L 50' AERIAL UTILITY	1HTLCHYN8GHA16614	35,000	DIESEL	79,044.16	01/01/84
91822 177	86 TRUCK: INTERNATIONAL FLATBED	1HTLDTVR2GHA58770	35,000	DIESEL	45,221.28	01/01/86
91822 180	87 TRUCK: THERMO-LAY ASPHALT	1FDWT74P6HVA64443	23,100	DIESEL	54,587.00	02/01/88
91822 181	89 TRACTOR: KENWORTH TANDEM TRUCK	1XKWD29X5KSS24167	56,860	DIESEL	71,788.76	05/01/89
91822 182	90 TRUCK: INTL STAKE TRUCK W/ HYD TAILGATE	1HTSAZRL5LH224932	24,160	DIESEL	30,973.91	09/01/89
91822 184	90 TRUCK: INTERNATIONAL 2-1/2 CY DUMP TRUCK	1HTSAZPL2LH229525	24,160	DIESEL	30,448.89	09/01/89
91822 188	91 TRUCK: MACK 10 CY DUMP TRUCK	1M2AY80C5MM005596	56,540	DIESEL	68,348.13	01/01/91
91822 189	91 TRUCK: MACK 10 CY DUMP TRUCK	1M2AY80C7MM005597	56,540	DIESEL	68,348.14	01/01/91
91822 193	91 TRUCK: CHEV KODIAK 2 1/2 CY DUMP	1GBK6H1JXMJ111673	24,260	DIESEL	35,143.19	11/01/91
91822 194	91 TRUCK: CHEV KODIAK 2 1/2 CY DUMP	1GBK6H1JOMJ111732	24,260	DIESEL	35,664.04	11/01/91
91822 195	91 TRUCK: CHEV KODIAK 2 1/2 CY DUMP	1GBK6H1J3MJ111806	24,260	DIESEL	35,143.19	11/01/91

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
91822 197	93 TRUCK: INT'L STAKE W/HYD TAILGATE	1HTSCPEL6PH469510	25,500	DIESEL	37,762.57	11/01/92
91822 199	93 TRUCK: INT'L BITUMIOUS TANK	1HTSDAPPN2PH472254	28,080	DIESEL	78,157.00	11/01/92
91822 201	92 TRUCK: GMC 7CY DUMP	1GDP7HLJ3NJ525485	35,000	DIESEL	45,289.00	11/01/92
91822 203	93 TRUCK: PETERBILT U/BRDG REACHAL CRANE357	AXPALBOX2PN331520	77,000	DIESEL	417,261.89	12/01/92
91822 204	84 TRUCK: INTERNATIONAL DUMP 10 CY	1HTGGA2T6RH571307	56,000	DIESEL	70,727.99	01/01/94
91822 205	94 TRUCK: CHEV KODIAK DUMP 2 1/2 CY	1GBK6HLJ2RJ103896	24,260	DIESEL	35,595.50	02/01/94
91822 206	94 TRUCK: CHEV KODIAK DUMP 2 1/2 CY	1GBK6HLJ5RJ103813	24,260	DIESEL	34,137.16	02/01/94
91822 207	94 TRUCK: CHEV KODIAK DUMP 7 CY	16BP7HLJ4RJ103790	35,550	DIESEL	43,328.35	02/01/94
91822 208	94 TRUCK: INT'L UNDERBRIDGE REACHALL CRANE	1HTGGA6T2RH548438	77,000	DIESEL	428,900.34	05/01/94
91822 209	94 TRUCK: GMC STAKE DUMP	1GDMTHLJ1RJ505924	27,060	DIESEL	39,577.73	04/01/94
91822 210	94 TRUCK: GMC STAKE DUMP	1GDM7HLJ2RJ506113	27,060	DIESEL	39,577.74	04/01/94
91822 212	95 INTL. ALTEC AERIAL BUCKET MOD. 4900	1HTSDAAN9SH641782	33,000	DIESEL	234,584.84	10/01/94
91822 213	95 INTL. ALTEC AERIAL BUCKET MOD. 4900	1GTSDAAB1SG641783	33,000	DIESEL	117,292.42	10/01/94
91822 214	95 TRUCK: INT'L ALTEC DERRIC	1HTSDAAR9SH641784	35,000	DIESEL	123,952.24	11/01/94
91822 215	95 TRUCK: FORD STAKE DUMP TRUCK	1FDWF80C5SVA18402	26,000	DIESEL	36,389.70	11/01/94
91822 216	95 TRUCK: FORD STAKE W/HYD HOIST	1FDWF80C7SVA18403	26,000	DIESEL	36,389.70	11/01/94
91822 217	95 TRUCK: FORD STAKE DUMP	1FDWF80C9SVA18404	26,000	DIESEL	36,389.70	11/01/94
91822 218	95 TRUCK: INT'L DUMP 12 CY	1HTGGAUT6SH641780	56,000	DIESEL	71,329.67	02/01/95
91822 219	95 TRUCK: INT'L DUMP 12 CY	1HTGGAUT8SH641781	0	DIESEL	70,808.82	02/01/95
91822 222	83 TRUCK: FORKLIFT (MILILARY)	3336022159	47,000	DIESEL	1,600.00	08/01/96
91822 223	97 TRUCK: INTL TUNNEL WASH VEHICLE	1HTSDAAR9VH46573	0	DIESEL	420,000.00	06/01/97
91822 224	99 TRUCK: INTERNATIONAL STAKE CREWCAB	1HTSCAAL5XH646633	0	DIESEL	71,294.23	06/01/99
91822 226	99 TRUCK: INT'L TECO AERIAL BUCKET	1HTSDAANOXH646635	33,000	DIESEL	179,086.70	06/01/99
91822 228	99 TRUCK: INT'L TECO AERIAL BUCKET	1HTSDAAN9XH646634	25,700	DIESEL	180,024.19	06/01/99
91822 230	99 TRUCK: FORD STAKE W/SCISSORS LIFT	1FDXF46FOXEC46765	15,000	DIESEL	76,867.99	06/01/99
91822 231	99 TRUCK: FORD F-800 W/BOOM	3FEFX8013XMA11609	33,000	DIESEL	121,266.15	06/01/99
91822 232	99 TRUCK: FORD F-8-- W/BOOM	3FEFX801XXMA11610	33,000	DIESEL	121,266.15	06/01/99
91822 233	99 TRUCK: FORD FLATBED	1FDAP56F7XEB75284	17,500	DIESEL	61,842.20	06/01/99
91822 234	00 TRUCK: INT'L. UTILITY SERVICE 4900	1HTSDAAN7YH212102	33,000	DIESEL	114,544.98	06/01/00
91822 235	00 TRUCK: TRACTOR PETERBILT MOD 378	1XPPD60X2YD505684	60,060	DIESEL	104,802.38	06/01/00
91822 236	00 TRUCK: INTERNATIONAL DUMP MOD. 2674	1HTGLAER3YS218405	54,060	DIESEL	101,903.92	06/01/00
91822 238	01 TRUCK: INT'L 3500 GALLON TANK	1HTGLAHT11H333470	64,000	DIESEL	140,919.12	06/01/01
91822 239	00 TRUCK: GMC 2 1/2 CU YD DUMP C 7500	1CDMTH1C3YJ516441	27,100	DIESEL	71,887.09	06/01/00
91822 240	00 TRUCK: GMC UTILITY BODY C6500	1GDGGH1C2JY516513	23,100	DIESEL	83,825.07	06/01/00
91822 241	00 TRUCK: GMC LIFT-ALL AERIAL BUCKET C-8500	1GDP7H1C4YJ516705	35,000	DIESEL	174,423.48	06/01/00
91822 242	02 TRUCK: INTERNATIONAL DUMP 4700	1HTSCAAM72H409692	25,500	DIESEL	64,541.86	06/01/02
91822 243	02 TRUCK: INTERNATIONAL DUMP 4700	1HTSCAAM92H409693	25,500	DIESEL	64,541.86	06/01/02
91822 244	02 TRUCK: INTERNATIONAL DUMP 4700	1HTSCAAM02H409694	25,500	DIESEL	64,541.86	06/01/02
91822 245	02 TRUCK: INTERNATIONAL DUMP 4700	1HTSCAAM22H409695	25,500	DIESEL	64,021.03	06/01/02
91822 246	02 TRUCK: INTERNATIONAL TRK TRACTOR 9900I	2HSCHAET62C030153	58,860	DIESEL	101,511.59	06/01/02
91822 247	87 TRUCK: FORD ASPHALT THERMO LAY TRUCK	1FDWT74P6HVA4443	23,100	DIESEL	.00	06/04/02
91822 248	02 TRUCK: GMC 2 1/2 CY DUMP C6500	1GDK7H1C2J502285	25,950	DIESEL	75,362.55	08/28/02
91822 249	02 TRUCK: GMC 2 1/2 CY DUMP C6500	1GDK7H1C12J502472	25,950	DIESEL	74,112.50	08/28/02
91822 250	03 TRUCK: PETERBILT FLATBED W/CRANE	1NPZL00X13D714740	64,000	DIESEL	262,151.29	04/25/03
91822 251	02 TRUCK: GMC DUMP C6500	1GDGGH1CX2J513852	23,100	DIESEL	65,923.31	05/14/03
91822 252	02 TRUCK: GMC DUMP	1GDK7H1C7J2J515405	25,950	DIESEL	75,978.03	05/14/03
91822 253	03 TRUCK: PETERBILT W/CRANE/DUMP	1NPZL00X33D714741	64,000	DIESEL	281,484.93	09/12/03
91822 254	04 TRUCK: GMC ALTEC AERIAL/UTILITY MDL 5500	1GDE5E1163P521412	19,500	DIESEL	95,355.56	01/15/04
91822 255	04 TRUCK: PETERBILT DUMP MDL 378	1NPFBL0X54D818437	58,000	DIESEL	146,217.88	01/20/04
91822 256	04 TRUCK: PETERBILT DUMP MDL 378	1NPFBL0X74D818438	58,000	DIESEL	146,217.88	01/20/04
91822 257	04 TRUCK: INTERNATIONAL DUMP MOD. 4400 SBA	1HTMKAAL44H652480	12,780	DIESEL	69,676.86	05/24/04

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
91822 260	05 TRUCK: PETERBILT TANK #357 SBFA	2NPLHZ8X75M852585	19,260	DIESEL	118,994.90	12/08/04
91822 261	04 TRUCK FORD F350 FLATBED	1FDWFP36P74EA68038	8,620	DIESEL	36,606.02	12/02/04
91822 262	04 TRUCK FORD F350 FLATBED	1FDWFP36P54EA68037	8,620	DIESEL	36,606.02	12/02/04
91822 263	04 TRUCK GMC AERIAL "C"	1GDE5C1205F503083	19,500	DIESEL	104,297.94	03/17/05
91822 264	05 TRUCK: GMC DUMP	1GDJ6C13X5F500437	25,640	DIESEL	73,592.38	06/21/05
91822 265	05 TRUCK: GMC DUMP	1GDJ6C1375F500492	25,640	DIESEL	73,592.38	06/21/05
91822 266	05 TRUCK: GMC "T" UTILITY SERVICE	1GDJ6C1285F506313	26,000	DIESEL	89,889.85	06/21/05
91822 267	05 TRUCK: GMC DUMP SOLID SIDE PANEL	1GDJ6C1335F531982	25,640	DIESEL	75,757.88	03/16/06
91822 268	05 TRUCK GMC FLATBED	1GDE5C1235F528737	19,500	DIESEL	57,894.68	03/16/06
91822 269	06 TRUCK TRACTOR PETERBILT 378SFFA	1XPFD40X66D632620	60,060	DIESEL	115,692.80	06/14/06
91822 270	07 TRUCK PETERBILT 7CY DUMP	2NPLHZ8X17M673736	17,160	DIESEL	117,166.09	02/09/07
91822 271	08 TRUCK GMC W/UTILITY BODY	1GDJ6C1BX8F401578	26,000	DIESEL	138,199.80	
91822 272	08 TRUCK GMC C5500 CAB CHASSIS W/AERIAL	1GDE5C1908F400294	19,500	DIESEL	145,360.76	04/21/08
91822 273	08 TRUCK INTERNATIONAL DUMP 7400	1HTWCAAR98J658638	36,220	DIESEL	112,043.88	04/30/08
91822 274	08 TRUCK INTERNATIONAL DUMP 4400	1HTMKAL68H658559	25,999	DIESEL	91,253.29	04/30/08
91832 147	99 TRAILER: TRAIL KING LOW BOY TK50RG-402	1TKS04021XM026782	64,140	DIESEL	41,666.40	06/01/99
91832 158	05 TRAILER: WATER OMCO 5,000 GAL TANDEM	DTF450BSR20506506	0	DIESEL	131,989.64	12/28/05
91832 161	06 TRAILER: TRAILKING LOWBOY TK70HGD-472	1TKJ047256M103637	0	DIESEL	68,894.15	06/14/06
91842 166	82 OVERLOWE PORTABLE FLOOD LIGHT	824681	0	DIESEL	13,856.00	08/01/92
91842 170	85 POWER CURBER CURBING MACHINE	150785094	0	DIESEL	6,562.40	08/01/85
91842 173	86 GENERATOR: MILLER WELDER/GENERATOR	JG057742	0	DIESEL	3,320.00	07/01/86
91842 174	86 GENERATOR: MILLER WELDER/GENERATOR	JG062668	0	DIESEL	3,320.00	07/01/86
91842 195	89 TRACTOR: FORD MOWER W/EXT FLAIL	BB85071	0	DIESEL	37,380.07	07/01/89
91842 211	93 TRACTOR: KUBOTA W/ FLAIL MOWER	21623	0	DIESEL	16,403.65	03/01/93
91842 213	93 LIGHT TOWER: MAGNUM PORTABLE 4060 K-MH	93294	0	DIESEL	10,610.40	09/01/93
91842 217	94 LIGHT TOWER: INGERSOLL-RAND MOD L64MH	247798 I.D.#KNC6237	0	DIESEL	13,402.51	10/01/94
91842 218	94 WELDING UNIT MILLER BIG 40 DIESEL	KE700618	0	DIESEL	8,145.80	12/01/94
91842 219	94 WELDING UNIT MILLER BIG 40 DIESEL	KE700621	0	DIESEL	8,145.80	12/01/94
91842 225	96 SPRAYER, FMC JOHN BEAN DML0E300FERH	JB00320NA	0	DIESEL	11,048.64	02/01/96
91842 226	96 CHIPPER, MORBARK EZ #2200	2773	0	DIESEL	24,342.79	12/01/96
91842 227	96 CHIPPER, MORBARK EZ #2200	2774	0	DIESEL	24,343.83	12/01/96
91842 228	96 CHIPPER, MORBARK EZ #2200	2775	0	DIESEL	24,343.00	12/01/96
91842 236	98 SIGN MESSAGE BOARD ELECTRONIC W/TRAILER	069801-T2	0	DIESEL	32,920.00	06/01/98
91842 240	98 MOWER: TORO GROUNDMASTER 580D	30581-80278	0	DIESEL	65,811.10	06/01/98
91842 241	98 MOWER: TORO GROUNDMASTER 325D MOD 30795	30795-80338	0	DIESEL	25,357.45	06/01/98
91842 242	98 MOWER: TORO GROUNDMASTER 325D MOD 30795	30795-80340	0	DIESEL	25,669.94	06/01/98
91842 243	98 MOWER: TORO GROUNDMASTER 325D MOD 30795	30795-80342	0	DIESEL	25,878.28	06/01/98
91842 244	99 MOWER: KUBOTA TRACTOR MOWER	7030-21047	0	DIESEL	41,200.33	06/01/99
91842 245	99 MOWER: KUBOTA TRACTOR MOWER	7030-21049	0	DIESEL	41,200.33	06/01/99
91842 246	99 AUGER, MELROE MODEL 15	187403365	0	DIESEL	2,166.65	06/01/99
91842 251	99 MOWER: TORO GROUND MASTER	30243-90111	0	DIESEL	19,041.17	06/01/99
91842 252	99 MOWER: TORO GROUNDMASTER 223-D	30243-90114	0	DIESEL	19,560.92	06/01/99
91842 253	99 MOWER: TORO GROUNDMASTER 223-D	30243-90118	0	DIESEL	19,560.92	06/01/99
91842 254	99 MOWER: TORO GROUNDMASTER 223-D MOWER	30243-90119	0	DIESEL	19,560.92	06/01/99
91842 255	99 MOWER: TORO GROUNDMASTER 223-D	30243-90120	0	DIESEL	19,560.92	06/01/99
91842 257	99 MOWER: TORO GROUNDMASTER 325D MOD. 30795	90146	0	DIESEL	27,113.60	06/01/99
91842 258	99 MOWER: TORO GROUNDMASTER 325D MOD. 30795	90142	0	DIESEL	27,113.60	06/01/99
91842 259	99 MOWER: TORO GROUNDMASTER 325D MOD. 30795	90268	0	DIESEL	27,113.59	06/01/99
91842 260	99 MOWER: TORO GROUNDMASTER 325D MOD. 30795	90390	0	DIESEL	27,113.59	06/01/99
91842 261	99 MOWER: TORO GROUNDMASTER 325D MOD. 30795	90176	0	DIESEL	26,686.38	06/01/99
91842 266	99 TRACTOR: KUBOTA W/SIDE EXT. MOWER M8200	10559	0	DIESEL	60,483.02	06/01/99

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVW	FUEL	-----ACQUISITION-----	
					COST	DATE
91842 267	99 TRACTOR: KUBOTA W/SIDE EXT MOWER M8200	10561	0	DIESEL	60,170.52	06/01/99
91842 268	99 MOWER: TORO GROUNDMASTER 580D TRIPLEX	90489	0	DIESEL	71,246.83	06/01/97
91842 269	00 LIGHT TOWER: WACKER LTP4	5112668	0	DIESEL	10,622.00	06/01/97
91842 270	00 MOWER: TORO GROUNDMASTER 325D 30795	200000106	0	DIESEL	26,888.27	06/01/97
91842 271	97 MESSAGE BOARD PORTABLE ADDCO SOLAR	DH1000 SN584940	3,700	DIESEL	37,000.00	06/01/97
91842 272	97 MESSAGE BOARD PORTABLE ADDCO SOLAR	DH 1000 SN 584984	3,700	DIESEL	37,000.00	06/01/97
91842 273	97 MESSAGE BOARD PORTABLE ADDCO SOLAR	DH1000 SN584985	3,700	DIESEL	37,000.00	06/01/97
91842 274	97 MESSAGE BOARD PORTABLE ADDCO SOLAR	DH1000 SN 584991	3,700	DIESEL	37,000.00	06/01/97
91842 275	97 MESSAGE BOARD PORTABLE ADDCO SOLAR	DH1000 SN 584997	3,700	DIESEL	37,000.00	06/01/97
91842 279	01 LIGHT TOWER: TRAILER MOUNT WACKER LTP4Z	5231940	1,990	DIESEL	9,330.00	06/01/97
91842 280	01 LIGHT TOWER: TRAILER MOUNT WACKER LTP4	5231941	1,990	DIESEL	9,330.00	06/01/97
91842 281	01 LIGHT TOWER: TRAILER MOUNT WACKER LTP4	5231942	1,990	DIESEL	9,330.00	06/01/97
91842 282	01 LIGHT TOWER: TRAILER MOUNT WACKER LTP4	5231943	1,990	DIESEL	9,330.00	06/01/97
91842 283	01 TRACTOR: KUBOTA UTIL. W/R MTD. FLAIL MOWER	10778	0	DIESEL	39,948.99	06/01/97
91842 284	02 MESSAGE BOARD: NATL SIGNAL TRAILER MTD	189M214112L358009	3,500	DIESEL	24,790.67	09/12/02
91842 285	02 MESSAGE BOARD: NATL SIGNAL TRAILER MTD	189M24132L358013	3,500	DIESEL	24,790.66	09/12/02
91842 288	02 TRACTOR: CASE UTIL W/REAR MTD FLAIL MOWER	C080RS4JJE1020833	0	DIESEL	39,166.42	09/27/02
91842 289	02 TRAILER: SOLAR TECH MTD MESSAGE BOARD	408562	2,900	DIESEL	24,834.28	11/20/02
91842 290	02 TRAILER: SOLAR TECH MTD MESSAGE BOARD	408563	2,900	DIESEL	24,834.28	11/20/02
91842 291	02 TRAILER: SOLAR TECH MTD MESSAGE BOARD	408564	2,900	DIESEL	24,834.28	11/20/02
91842 292	02 TRAILER: SOLAR TECH MTD MESSAGE BOARD	408565	2,900	DIESEL	24,834.28	12/12/02
91842 293	02 LIGHT TOWER: INGERSOLL-RAND TRAILER MTD.	331077/1077	3,640	DIESEL	12,812.41	09/26/02
91842 294	02 LIGHT TOWER: INGERSOLL-RAND TRAILER MTD	3310781078	3,640	DIESEL	12,812.42	09/26/02
91842 295	02 LIGHT TOWER: INGERSOLL-RAND TRAILER MTD	331079/1079	3,640	DIESEL	12,812.42	09/26/02
91842 296	02 MOWER: TORO GROUNDMASTER 328D	30627-220000268	0	DIESEL	26,281.08	03/25/03
91842 297	03 TRACTOR: FORD T590 W/EXT S/R MTD FLAIL	199806B	0	DIESEL	72,916.20	10/23/03
91842 298	03 TRACTOR: FORD T590 W/EXT. S/R MTD FLAIL	199913B	0	DIESEL	72,916.20	10/27/03
91842 299	03 TRACTOR: FORD T590 W/EXT. S/R MTD FLAIL	200222B	0	DIESEL	72,916.20	10/27/03
91842 301	03 TRACTOR: KUBOTA UTIL. W/REAR MTD FLAIL	11071	0	DIESEL	41,727.45	12/26/03
91842 302	03 TRACTOR: KUBOTA UTIL W/REAR MTD FLAIL	11073	0	DIESEL	41,727.45	12/26/03
91842 303	85 LIGHT TOWER: OVER LOWE	851824/M	0	DIESEL	1,700.00	06/30/03
91842 304	85 LIGHT TOWER: OVER LOWE	851792/M	0	DIESEL	1,700.00	06/30/03
91842 305	85 LIGHT TOWER: OVER LOWE	851846/M	0	DIESEL	1,700.00	06/30/03
91842 311	05 LIGHT TOWER: INGERSOLL-RAND LIGHTSOURCE	356563UEP789	0	DIESEL	11,600.00	06/30/06
91852 129	82 CRAFCO ASPHALT SEALER W/JOINT CRACK MACH	3149 & C0185	3,500	DIESEL	23,040.16	09/01/82
91852 136	85 TRUCK: INTL SEWER HYDROJET VAC CLEANER	1HTLDTVR4PHA62673	35,180	DIESEL	104,893.36	10/01/85
91852 137	84 COMPRESSOR: LEROI	3119X1100	2,560	DIESEL	12,064.00	09/01/86
91852 141	88 LOADER: JOHN DEERE ARTICULATING	DW644ED520958	34,404	DIESEL	96,838.52	12/01/88
91852 142	88 BACKHOE: CASE LOADER	JJG0012229	17,500	DIESEL	38,323.03	11/01/88
91852 145	91 CASE LOADER/BACKHOE	JJG0163916	20,000	DIESEL	33,986.57	10/01/91
91852 148	92 COMPRESSOR: ATLAS COPCO PORTABLE AIR	ARP978949	0	DIESEL	11,197.95	10/01/92
91852 151	93 COMPRESSOR: ATLAS COPCO PORTABLE	H01600414	0	DIESEL	11,350.07	12/01/93
91852 152	93 JOHN DEERE BACKHOE TURBO 4X4	T0410DG794985	0	DIESEL	56,231.43	12/01/93
91852 153	93 ROLLER: DYNAPAC TANDEM CC-211	61510446	0	DIESEL	65,121.04	12/01/93
91852 155	94 SWEEPERS: JOHNSTON VANGUARD 4000 SP	1JSVM4H2XRC041015	26,000	DIESEL	134,292.10	08/01/94
91852 157	94 LOADER: CASE MDL 621-B	JEE0040796	0	DIESEL	79,404.42	10/01/94
91852 158	94 LOADER: CASE MDL 821-B	JER0040797	0	DIESEL	126,904.57	10/01/94
91852 159	96 LOADER: BOBCAT SKID INGERSOLL RAND #763	512220135	0	DIESEL	17,807.36	12/01/96
91852 160	98 LOADER/BACKHOE JOHN DEERE 310SE 4X4	TO310SE848919	0	DIESEL	68,393.31	06/01/98
91852 161	98 LOADER/BACKHOE JOHN DEERE 310SE 4X4	TO310SE848978	0	DIESEL	57,976.71	06/01/98
91852 162	99 SWEEPER: ELGIN/STERLING 4-WHEEL MECH.	49H6WFAA6XHA71218	32,000	DIESEL	15,138.61	06/01/99



Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
91852 163	99 BOBCAT: MELROE INGERSOLL RAND 873	514124589	0	DIESEL	35,854.77	06/01/99
91852 164	99 LOADER/FORKLIFT: KOMATSU WA180-3L	A80497	0	DIESEL	74,634.94	06/01/99
91852 165	00 COMPRESSOR: PDS 1855 AIRMAN AIR	53-6A11637	0	DIESEL	13,395.00	06/01/00
91852 166	99 ROLLER: WACKER VIBRATORY RD-25	5080819	0	DIESEL	30,721.25	06/01/99
91852 167	00 BOBCAT: MELROE INGERSOLL RAND 873	514141825	0	DIESEL	32,313.60	06/01/00
91852 168	00 BOBCAT: MELROE INGERSOLL RAND 873	514141831	0	DIESEL	32,313.60	06/01/00
91852 169	00 TRUCK: INT'L SEWER HYDRO JET VACUUM	1HTGLAHTOYH333471	66,000	DIESEL	253,878.68	06/01/00
91852 170	01 SWEEPER: INT'L W/ELGIN CROSSWIND 4700	1HTSCAAN81H333472	33,000	DIESEL	135,115.42	06/01/01
91852 171	02 TRUCK: VOLVO SEWER HYDRO VAC JET CLEANER	4V5KC9UF92N329529	66,000	DIESEL	267,290.45	06/01/02
91852 172	01 LOADER: NEW HOLLAND LS 180	187694	0	DIESEL	32,770.82	06/01/02
91852 173	02 TRUCK: GMC MOUNTED DIESEL SWEEPER	1GDP7C1C02J504190	34,350	DIESEL	171,392.68	06/18/02
91852 174	02 TRUCK: GMC MOUNTED DIESEL SWEEPER	1GDP7C1C02J504223	34,350	DIESEL	171,288.71	06/18/02
91852 175	02 GRADER: GALION ARTICULATED MOTOR GRADER	71079	0	DIESEL	108,332.64	06/18/02
91852 176	02 SWEEPER: GMC TRUCK MOUNTED T8500	1GDP7C1C22J513277	34,350	DIESEL	172,846.84	12/16/02
91852 177	02 SWEEPER: GMC TRUCK MOUNTED	1GDP7C1C82J513588	34,350	DIESEL	172,846.82	12/16/02
91852 178	03 BACKHOE/LOADER: NEW HOLLAND MOD LB90	031046530	0	DIESEL	68,228.73	05/04/04
91852 179	04 LOADER: CATERPILLAR TRACK MOD 939C	6DS01575	0	DIESEL	94,008.36	03/07/05
91852 180	05 TRUCK PETERBILT SEWER HYDRO JET-VACUUM	1NPAL00X05D851359	37,540	DIESEL	276,122.91	03/07/05
91852 181	04 SWEEPER GMC TRUCK T7F042	1GDM7F1344F509306	33,000	DIESEL	205,462.03	03/17/05
91852 182	05 LOADER: KOMATSU FRONT END WHEEL	65912	0	DIESEL	95,311.89	12/28/05
91852 183	05 LOADER/BACKHOE CASE 590SM	N5C394588	0	DIESEL	97,916.04	06/14/06
91852 184	08 EXCAVATOR 07 KOMATSU MOD FCL38USLC	21539	0	DIESEL	140,131.36	02/11/08
91852 185	07 PATCHER 07 PYTHON POTHOLE	PP-002-1207	0	DIESEL	288,871.90	04/02/08
91862 103	76 DROFT MOBILE CRANE	6223703	10,500	DIESEL	20,000.00	06/01/78
91862 108	98 TRUCK: LIFT BOOM GROVE ARTICULAT'G AMZ68	46668	27,420	DIESEL	95,907.76	09/01/98
91862 109	98 BARRIER TRANSFER MACHINE, BTM ZIPMOBILE	195	69,292	DIESEL	1,700,000.00	07/29/98
91862 110	98 BARRIER TRANSFER MACHINE, BTM ZIPMOBILE	196	69,292	DIESEL	1,700,000.00	09/11/98
91862 113	00 PALLET JACK: HYSTER ELECTRIC 60	B199H06696X	0	DIESEL	10,200.00	04/18/00
91862 114	99 PUMP GORMAN-RUPP PORT TRASH PA6160-4045D	1160590	5,200	DIESEL	39,893.49	06/01/00
91862 115	84 FORKLIFT: 84 TCM 6000 MODEL #FG3DNT	44430599	16,280	DIESEL	1,400.00	05/17/04
91862 116	06 CHIPPER BANDIT 280	1107	0	DIESEL	46,666.38	12/29/06
91862 117	06 CHIPPER BANDIT 280	1108	0	DIESEL	46,666.36	12/29/06
91862 118	06 CHIPPER BANDIT 280	1110	0	DIESEL	46,666.36	12/29/06
					FUEL TYPE TOTAL	
91812 537	97 TRUCK: CHEV PICKUP	1GCCS14X9V8171357	0	PROPANE	19,634.36	05/01/97
91812 563	99 TRUCK: GMC SIERRA EXT CAB PICKUP 2500	1GTGC29UXXE529685	8,600	PROPANE	32,735.04	06/01/99
91812 568	97 TRUCK: CHEVROLET MPVH BLAZER	1GNDT13W8V2239006	0	PROPANE	.00	06/01/97
91812 572	98 TRUCK: FORD MPVH EXPLORER	1FMZU34X9WUA20006	0	PROPANE	.00	06/01/98
91812 573	98 TRUCK: FORD MPVH EXPLORER	1FMZU34X0WUA20007	0	PROPANE	.00	06/01/98
91812 574	98 TRUCK: FORD MPVH EXPLORER	1FMZU34X2WUA20008	0	PROPANE	.00	06/01/98
91812 576	98 TRUCK: FORD RANGER PICK UP	1FTZR15X5WPA15246	0	PROPANE	.00	06/01/98
91812 589	00 TRUCK: FORD 4 W/D PU W/ALTERNATE FUEL	1FTZR15X3YPB48056	5,080	PROPANE	29,959.18	06/01/00
91812 590	00 TRUCK: FORD 4 W/D PU W/ALTERNATE FUEL	1FTZR15X5YPB48057	5,080	PROPANE	29,959.18	06/01/00
91812 641	04 VAN FORD E350	1FMNE31L94HB42867	0	PROPANE	39,765.11	03/17/05
91812 642	04 VAN: FORD E350	1FMNE31L74HB42866	0	PROPANE	39,765.11	03/17/05
91842 233	97 THERMO PLASTIC STRIPING MACHINE		0	PROPANE	.00	01/01/97
					FUEL TYPE TOTAL	
91812 591	00 TRUCK: FORD PU W/ALTERNATE FUEL	2FTFX17ZYCA99791	7,700	PROPANE/GAS	32,342.98	06/01/00
91812 592	00 TRUCK: FORD PU W/ALTERNATE FUEL	2FTFX17ZLYCA99792	7,700	PROPANE/GAS	31,822.15	06/01/00

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION	SERIAL NUMBER	GVM	FUEL	-----ACQUISITION-----	
					COST	DATE
91812 593	00 TRUCK: FORD FU W/ALTERNATE FUEL	2FTPX17Z3YCA99793	7,700	PROPANE/GAS	32,342.98	06/01/00
91812 650	05 TRUCK FORD F150 PICKUP	1FTRF12W35NA04809	0	PROPANE/GAS	37,305.33	10/04/05
91812 651	05 TRUCK; FORD 150 PICKUP	1FTRF12W15NA04808	0	PROPANE/GAS	37,305.34	10/04/05
91812 652	05 TRUCK; FORD 150 PICKUP	1FTRF12WX5NA04807	0	PROPANE/GAS	37,305.34	10/04/05
91812 653	05 TRUCK; FORD 150 PICKUP	1FTRF12WX5NA04810	0	PROPANE/GAS	37,305.33	10/04/05
91812 654	04 VAN: FORD E350	1FMNE31L15HA05889	0	PROPANE/GAS	39,084.12	12/14/05
91812 700	07 SUV 06 FORD SPORT UTILITY EXPLORER	1FMEU62E56UB38457	0	PROPANE/GAS	32,245.22	06/22/07
91812 701	07 VAN 06 FORD E350	1FMNE31S66DB02148	0	PROPANE/GAS	39,752.87	06/21/07
91812 708	07 VAN FORD E150	1FMNE11LX7DB34373	0	PROPANE/GAS	43,739.25	04/21/08
91812 709	07 VAN FORD E150	1FMNE11L77DB34377	0	PROPANE/GAS	43,739.25	04/21/08
91812 711	08 SUV FORD ESCAPE COMPACT	1FMCU03Z08KB33431	0	PROPANE/GAS	29,922.50	04/30/08
91812 713	08 SUV FORD EXPLORER SPORT UTILITIY 4X4	1FMEU73E78UA15850	0	PROPANE/GAS	41,704.56	05/28/08
					FUEL TYPE TOTAL	
91812 604	01 SEDAN: FORD 4 DOOR TAURUS	1FAPP52221A253114	4,684	ETHONAL/GAS	17,605.74	06/01/01
91812 612	02 SEDAN: FORD TAURUS 4DR	1FAPP52282A196807	4,684	ETHONAL/GAS	18,083.83	08/20/02
91812 618	02 TRK: FORD EXPLORER 4X4 4 DR.	1FMZU72K22ZC52474	5,840	ETHONAL/GAS	43,132.22	09/12/02
91812 619	02 TRK: FORD EXPLORER SPORT UTILITY	1FMZU62K12ZC52475	5,700	ETHONAL/GAS	40,151.83	09/12/02
91812 634	03 TRUCK FORD PU	1FTYR44V43TA01225	0	ETHONAL/GAS	18,500.25	12/09/04
91812 635	03 TRUCK FORD PU	1FTZR44V03PB22573	0	ETHONAL/GAS	18,500.25	12/09/04
91812 636	03 TRUCK FORD PU	1FTZR44V83PB35376	0	ETHONAL/GAS	18,500.25	12/09/04
91812 638	04 TRUCK DODGE PU	1D7HA16P54J253265	0	ETHONAL/GAS	22,807.16	12/09/04
91812 643	05 SEDAN: FORD 4 DR. TAURUS	1FAPP532X5A160474	0	ETHONAL/GAS	14,551.99	06/24/05
91812 644	05 SEDAN: FORD 4DR TAURUS	1FAPP53265A160472	0	ETHONAL/GAS	1.00	06/24/05
91812 645	05 SEDAN: FORD 4 DR TAURUS	1FAPP53285A160473	0	ETHONAL/GAS	1.00	06/24/05
91812 656	05 SEDAN: FORD TAURUS 4 DR.	1FAPP532X5A303679	0	ETHONAL/GAS	15,940.24	12/28/05
91812 657	05 SEDAN: FORD TAURUS 4 DR.	1FAPP53245A303676	0	ETHONAL/GAS	15,940.24	12/28/05
91812 658	05 SEDAN: FORD TAURUS 4 DR.	1FAPP53265A303677	0	ETHONAL/GAS	15,940.24	12/28/05
91812 659	05 SEDAN: FORD TAURUS 4 DR.	1FAPP53285A303681	0	ETHONAL/GAS	15,940.23	12/28/05
91812 660	05 SEDAN: FORD TAURUS 4 DR.	1FAPP53285A303678	0	ETHONAL/GAS	15,940.23	12/28/05
91812 661	05 SEDAN: FORD TAURUS 4 DR.	1FAPP53265A303680	0	ETHONAL/GAS	15,940.24	12/28/05
91812 675	05 SUV FORD EXPLORER	1FMZU62KK52A62730	0	ETHONAL/GAS	23,176.94	12/30/05
91812 681	06 SEDAN FORD TAURUS	1FAPP53266A262890	0	ETHONAL/GAS	24,037.98	01/23/07
91812 682	06 TRUCK DODGE RAM 1500 QUAD CAB PU	1D7HA18P96J200732	0	ETHONAL/GAS	26,568.58	12/22/06
91812 683	06 TRUCK DODGE QUAD CAB RAM 1500 PU	1D7HA18P06J200733	0	ETHONAL/GAS	26,568.58	12/22/06
91812 684	06 TRUCK DODGE RAM 1500 PU	1D7HA16P36J200728	0	ETHONAL/GAS	22,772.77	12/22/06
91812 685	06 TRUCK DODGE RAM 1500 PU	1D7HA16P36J200731	0	ETHONAL/GAS	22,772.77	12/22/06
91812 686	06 TRUCK DODGE RAM 1500 PU	1D7HA16P56J200729	0	ETHONAL/GAS	22,772.77	12/22/06
91812 687	06 TRUCK DODGE RAM 1500 PU	1D7HA16P16J200730	0	ETHONAL/GAS	22,772.77	12/22/06
91812 688	06 TRUCK DODGE RAM 1500 QUAD CAB 4X4	7HU18P66J201912	0	ETHONAL/GAS	28,477.94	12/22/06
91812 689	06 TRUCK DODGE RAM 1500 QUAD CAB 4X4	1D7HU18P86J201913	0	ETHONAL/GAS	28,477.94	12/22/06
91812 690	06 TRUCK DODGE RAM 1500 QUAD CAB 4X4	1D7HU18PX6J201914	0	ETHONAL/GAS	28,477.94	12/22/06
91812 699	07 TRUCK 06 FORD F150 PU	1FTRF12VX6NB41044	0	ETHONAL/GAS	24,185.05	04/18/07
					FUEL TYPE TOTAL	
91822 227	99 FORKLIFT: CATERPILLAR ELECTRIC LIFT TRK	A2EC320272	0	ELECTRIC	31,437.30	06/01/99
					FUEL TYPE TOTAL	
91832 102	77 TRAILER: EVERGREEN SCALE	103	0	NOT APPLICABLE	.00	03/01/77
91832 103	49 TRAILER: FREUHAUF 20 TON LOWBOY W/O RAMP	FW15025	56,000	NOT APPLICABLE	1,016.19	99/99/99
91832 111	82 TRAILER: TRAIL KING SMALL	1TRU01621CM103194	12,500	NOT APPLICABLE	4,321.12	11/01/82

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION----- COST	DATE
91832 113	82 TRAILER: TRAIL KING SMALL	1TKU01625CM103196	12,500	NOT APPLICABLE	4,321.12	11/01/82
91832 115	84 TRAILER: EAGER BEAVER UTILITY	1120TL10XES030032	7,200	NOT APPLICABLE	.00	10/01/84
91832 117	86 TRAILER: MANN'S WELDING UTILITY SCALE	TL648	0	NOT APPLICABLE	12,420.00	09/01/86
91832 118	88 TRAILER: HOMEMADE UTILITY	SOH022588HON	0	NOT APPLICABLE	2,855.00	03/01/88
91832 119	87 TRAILER: ZIEMAN TILT	1ZCT27E20HZP13858	14,000	NOT APPLICABLE	5,662.62	05/01/89
91832 120	89 TRAILER: CALKINS BOAT	1CXBP1413KS910653	0	NOT APPLICABLE	427.08	06/01/89
91832 125	66 TRAILER: STEVENS MFG. CO. CARGO	3801	0	NOT APPLICABLE	150.00	09/01/90
91832 126	93 TRAILER: TRAILVATOR UTILITY	1T9ME1419PM199185	4,680	NOT APPLICABLE	6,408.35	10/01/93
91832 127	93 TRAILER: ZIEMAN UTILITY TILT MOD-2310	1ZC729B25PZP17467	22,500	NOT APPLICABLE	.00	12/01/93
91832 128	94 TRAILER: W/SKID RESISTANCE EQUIPMENT	M1270-082	0	NOT APPLICABLE	183,874.00	02/01/95
91832 129	96 TRAILER: (HOMEMADE)		0	NOT APPLICABLE	1.00	02/01/96
91832 130	96 TRAILER: SPECTRUM SCALE LT-2900	1S9EC1613TH364445	0	NOT APPLICABLE	16,110.93	12/01/96
91832 131	96 TRAILER: SPECTRUM SCALE LT-2900	1S9EC1615TH364446	0	NOT APPLICABLE	16,110.93	12/01/96
91832 132	96 TRAILER: BOBCAT SHOPBUILT BCT-16-7500	1S9BS2126TH364435	0	NOT APPLICABLE	6,250.00	12/01/96
91832 133	97 TRAILER: SHOPBUILT UTILITY	1S9US121XVH364555	0	NOT APPLICABLE	885.41	06/01/97
91832 134	97 TRAILER: SHOPBUILT UTILITY	1S9US1212VH364556	0	NOT APPLICABLE	885.41	06/01/97
91832 135	98 TRAILER: WEIGHT SCALE	EC161XVH364302	0	NOT APPLICABLE	17,587.38	06/01/98
91832 136	97 TRAILER WEIGHT SCALE SHOPBLT LODEC3030	1S9EC1611VH36403	0	NOT APPLICABLE	17,014.47	06/01/97
91832 137	98 TRAILER: INTERNATIONAL BWS08	1ZFUF0818WB001623	0	NOT APPLICABLE	2,520.00	06/01/98
91832 138	98 TRAILER: SPECTRUM LAWNMOWER T3000	1S9LS1828WH364459	5,000	NOT APPLICABLE	5,800.00	06/01/98
91832 139	98 TRAILER: SPECTRUM LAWNMOWER T3000	1S9LS1826WH364460	5,000	NOT APPLICABLE	5,800.00	06/01/98
91832 140	98 TRAILER: SPECTRUM LAWNMOWER T3000	1S9LS1824WH364461	5,000	NOT APPLICABLE	5,800.00	06/01/98
91832 141	99 TRAILER: ZIEMAN UTILITY #8012 SPL	1ZCE18S22XZP20671	8,300	NOT APPLICABLE	6,508.30	06/01/99
91832 142	99 TRAILER: ZIEMAN UTILITY #8012 SPL	1ZCE18S24XZP20672	8,300	NOT APPLICABLE	6,508.29	06/01/99
91832 143	99 TRAILER: ZIEMA UTILITY #8012 SPL	1ZCE18S26XZP20673	8,300	NOT APPLICABLE	6,508.00	06/01/99
91832 144	99 TRAILER: SPECTRUM BOBCAT MOD. 2580	1S9BS2420XH364108	0	NOT APPLICABLE	7,276.00	06/01/99
91832 145	99 TRAILER: SPECTRUM LAWNMOWER	1S9LS1828XH364110	4,980	NOT APPLICABLE	5,800.00	06/01/99
91832 146	99 TRAILER: CHILTON UTILITY UT4815S-1	14DAC0810XC000231	1,500	NOT APPLICABLE	2,200.00	06/01/99
91832 148	00 TRAILER: SPECTRUM LAWNMOWER T-3000	1S9LS1826YH364107	5,280	NOT APPLICABLE	6,249.96	06/01/00
91832 149	00 TRAILER: BUTLER FLAT BED LT-812-DH	00-2059-2250LB	8,500	NOT APPLICABLE	5,168.75	06/01/00
91832 150	00 TRAILER: SPECTRUM BOBCAT BCT 16-12000	1S9BC2320YH364111	12,000	NOT APPLICABLE	8,749.94	06/01/00
91832 151	00 TRAILER: SPECTRUM BOBCAT	1S9BC2322YH364112	12,000	NOT APPLICABLE	8,749.94	06/01/99
91832 152	00 TRAILER: CARRY-ON UTILITY 5X8G	4YMUK0813YH042326	0	NOT APPLICABLE	2,864.68	06/01/00
91832 153	00 TRAILER: CARRY-ON UTILITY 5X8G	4YMUK0815YH042327	0	NOT APPLICABLE	2,864.68	06/01/00
91832 154	01 TRAILER: ZIEMAN UTILITY	1ZCE18S2712P23136	8,300	NOT APPLICABLE	8,958.28	06/01/01
91832 155	01 TRAILER: ZIEMAN TILT 1157	1ZCT21T261ZP23378	14,000	NOT APPLICABLE	8,609.32	06/01/01
91832 156	02 TRAILER: SPECTRUM LAWNMOWER	1S9US18201H364193	5,440	NOT APPLICABLE	7,291.62	03/25/03
91832 157	03 TRAILER: ZIEMAN UTILITY	1ZCE18S233ZP24562	8,300	NOT APPLICABLE	6,770.79	12/09/03
91832 159	05 SCALES ELECTRONIC AXLE W/TRAILER		0	NOT APPLICABLE	27,505.00	09/22/06
91832 160	05 SCALES ELECTRONIC AXLE W/TRAILER		0	NOT APPLICABLE	27,505.00	09/22/06
91842 123	75 WELDER: LINCOLN ARC	4795022	0	NOT APPLICABLE	3,121.00	06/01/97
91842 230	96 ERADICATOR, ROBIN EH 17	1098152	0	NOT APPLICABLE	7,209.00	12/01/96
91842 231	96 VACUUM: CLEANER, NElfISK GS83	960529-2064	0	NOT APPLICABLE	4,923.00	12/01/96
91842 237	98 OPEN RADAR SPEED MONITOR UNIT	4AGAU09SXWC027173	0	NOT APPLICABLE	9,765.00	06/01/98
91842 238	98 OPEN RADAR SPEED MONITOR UNIT	4AGAU09S1WC027174	0	NOT APPLICABLE	9,765.00	06/01/98
91842 247	99 POST POUNDER, DANUSER MODEL MD-6	11827	0	NOT APPLICABLE	4,718.71	06/01/99
91842 248	98 CART, EZ-GO GOLF CARGO CARRIERS #875E		0	NOT APPLICABLE	6,236.92	06/01/98
91842 249	98 CART, EZ-GO GOLF CARGO CARRIERS #875E		0	NOT APPLICABLE	6,236.92	06/01/98
91842 250	98 CART, EZ-GO GOLF CARGO CARRIERS #875E	21675	0	NOT APPLICABLE	6,236.92	06/01/98
91842 256	97 MIXER: BETONIERA WORKMAN 250 CONCRETE	0000138311	0	NOT APPLICABLE	2,080.00	06/01/97
91842 264	99 MONITOR: MIGHTY MOVER SPEED CONTROL	4AGAU1112XC029946	2,000	NOT APPLICABLE	10,020.77	06/01/99

Appendix 6: Department of Transportation - Highways Division Vehicle Data

HIGHWAYS DIVISION - OAHU DISTRICT  
 E/U ALTERNATIVE FUEL REPORT BY FUEL TYPE 9/10/08

PERIOD: 07/01/07 THRU 06/30/08

EQUIPMENT	DESCRIPTION.....	SERIAL NUMBER.....	GVW	FUEL.....	-----ACQUISITION-----	
					COST	DATE
91842 265	99 MONITOR: MIGHTY MOVER SPEED CONTROL	4AGAU1114XC029947	2,000	NOT APPLICABLE	10,020.77	06/01/99
91842 286	02 TRAILER: ITCP MTD SPEED CONTROL MONITOR	40XK111S02A0007	2,000	NOT APPLICABLE	11,999.00	09/12/02
91842 287	02 TRAILER: ITCP MTD SPEED CONTROL MONITOR	40XK111S22A020008	2,000	NOT APPLICABLE	11,999.00	09/12/02
91842 309	05 ARROWBOARD WANCO W/TRAILER WTSP75-LSAC	5F11S101351000	0	NOT APPLICABLE	7,830.00	09/22/06
91842 310	05 ARROWBOARD WANCO W/TRAILER WTSP75-LSAC	5F11S551000458	0	NOT APPLICABLE	7,830.00	09/22/06
91842 313	06 WELDER LINCOLN TIG K1828-1	U1060202431	0	NOT APPLICABLE	17,580.00	05/01/07
91842 315	06 POT PREMELTER TRANTEX THERMOPLASTIC	000504/000505	0	NOT APPLICABLE	133,702.00	02/16/07
91842 319	06 VACUUM EDCO 18 GAL DR VAC 250	061814230	0	NOT APPLICABLE	8,705.94	02/16/07
91842 321	07 MIXER STEEL DRUM CONCRETE WHITEMAN	C2752167	0	NOT APPLICABLE	3,508.00	12/13/07
91842 322	07 MIXER STEEL DRUM CONCRETE WHITEMAN	C2752132	0	NOT APPLICABLE	3,508.00	12/13/07
91842 323	07 MACHINE STRIPING TRANTEX THERMOPLASTIC	K8756	0	NOT APPLICABLE	44,965.00	04/23/08
					FUEL TYPE TOTAL	

**HHFDC ELECTRICAL CONSUMPTION DATA BY PROJECT**

**FY - 2011**

**HONOKOWAI KAUAHALE**

**KWH**

**COSTS**

JULY		5,525		\$ 1,965.37
AUGUST		6,604		\$ 2,332.28
SEPTEMBER		6,559		\$ 2,055.59
OCTOBER		6,728		\$ 2,383.53
NOVEMBER		6,762		\$ 2,537.21
DECEMBER		7,202		\$ 2,644.25
JANUARY		7,117		\$ 2,723.70
FEBRUARY		6,829		\$ 2,682.01
MARCH		7,228		\$ 2,857.26
APRIL		6,003		\$ 2,536.16
MAY		6,029		\$ 2,623.01
JUNE		5,921		\$ 2,667.14
	TOTALS	78,507		\$ 30,007.51

**KAMAANA HALE**

**KWH**

**COSTS**

JULY		3,101		\$ 1,149.70
AUGUST		2,983		\$ 1,175.65
SEPTEMBER		2,809		\$ 1,054.32
OCTOBER		2,967		\$ 1,106.54
NOVEMBER		2,771		\$ 1,049.28
DECEMBER		2,691		\$ 1,032.15
JANUARY		3,205		\$ 1,291.60
FEBRUARY		2,781		\$ 1,101.53
MARCH		2,695		\$ 1,127.13
APRIL		2,901		\$ 1,257.30
MAY		2,717		\$ 1,251.38
JUNE		2,704		\$ 1,268.33
	TOTALS	34,325		\$ 13,864.91

**HHFDC ELECTRICAL CONSUMPTION DATA BY PROJECT**

**FY - 2011**

**KAMAKEE VISTA**

**KWH**

**COSTS**

JULY		63,229		\$ 14,790.44
AUGUST		59,059		\$ 14,186.54
SEPTEMBER		57,979		\$ 13,965.86
OCTOBER		59,326		\$ 14,084.10
NOVEMBER		59,466		\$ 14,074.43
DECEMBER		64,215		\$ 15,081.00
JANUARY		53,415		\$ 13,241.37
FEBRUARY		60,644		\$ 14,982.27

MARCH		54,991		\$ 14,474.64
APRIL		81,433		\$ 16,631.80
MAY		54,702		\$ 15,718.60
JUNE		59,573		\$ 17,499.00
	TOTALS	728,032		\$ 178,730.05

**KAUHALE KAKAAKO**

KWH

COSTS

JULY		42,801		\$ 9,097.96
AUGUST		39,108		\$ 8,575.05
SEPTEMBER		37,438		\$ 8,306.64
OCTOBER		41,207		\$ 8,884.48
NOVEMBER		37,776		\$ 8,259.63
DECEMBER		38,679		\$ 8,533.25
JANUARY		42,963		\$ 9,573.40
FEBRUARY		39,164		\$ 9,087.50
MARCH		37,039		\$ 9,231.04
APRIL		43,646		\$ 11,179.57
MAY		38,286		\$ 9,788.21
JUNE		39,510		\$ 10,432.58
	TOTALS	477,617		\$ 110,949.31

**HHFDC ELECTRICAL CONSUMPTION DATA BY PROJECT**

FY - 2011

**KEKUILANI COURTS**

KWH

COSTS

JULY		4,194		\$ 1,069.95
AUGUST		3,758		\$ 974.75
SEPTEMBER		4,483		\$ 1,184.17
OCTOBER		3,732		\$ 999.27
NOVEMBER		3,763		\$ 938.55
DECEMBER		3,806		\$ 999.20
JANUARY		4,239		\$ 1,093.89
FEBRUARY		3,553		\$ 966.01
MARCH		3,957		\$ 1,092.48
APRIL		3,643		\$ 1,059.32
MAY		4,209		\$ 1,263.11
JUNE		4,343		\$ 1,364.57
	TOTALS	47,680		\$ 13,005.27

**KEKUILANI GARDENS**

KWH

COSTS

JULY		3,876		\$ 1,017.66
AUGUST		3,463		\$ 912.21
SEPTEMBER		3,953		\$ 1,043.58
OCTOBER		3,345		\$ 896.09

NOVEMBER		3,707		\$ 973.91
DECEMBER		3,542		\$ 973.11
JANUARY		3,773		\$ 1,045.48
FEBRUARY		3,172		\$ 889.70
MARCH		3,429		\$ 972.55
APRIL		3,184		\$ 972.92
MAY		3,717		\$ 1,185.74
JUNE		3,649		\$ 1,207.65
TOTALS		42,810		\$ 12,090.60

**HHFDC ELECTRICAL CONSUMPTION DATA BY PROJECT** **FY - 2011**

**LAILANI**

**KWH**

**COSTS**

JULY		5,422		\$ 2,753.46
AUGUST		5,929		\$ 2,964.49
SEPTEMBER		5,101		\$ 2,878.82
OCTOBER		6,350		\$ 3,063.64
NOVEMBER		7,046		\$ 3,404.74
DECEMBER		5,939		\$ 3,045.12
JANUARY		6,779		\$ 3,379.58
FEBRUARY		5,884		\$ 3,088.77
MARCH		6,277		\$ 3,304.06
APRIL		6,141		\$ 3,250.65
MAY		6,435		\$ 3,534.23
JUNE		5,803		\$ 3,421.11
TOTALS		73,106		\$ 38,088.67

**NANI O PUNA**

**KWH**

**COSTS**

JULY		3,773		\$ 1,609.89
AUGUST		2,996		\$ 1,368.23
SEPTEMBER		2,953		\$ 1,388.67
OCTOBER		3,221		\$ 1,467.36
NOVEMBER		2,578		\$ 1,196.03
DECEMBER		3,027		\$ 1,408.24
JANUARY		3,423		\$ 1,558.96
FEBRUARY		3,104		\$ 1,399.79
MARCH		2,972		\$ 1,386.40
APRIL		2,855		\$ 1,403.34
MAY		2,398		\$ 1,262.64
JUNE		2,442		\$ 1,339.60
TOTALS		35,742		\$ 16,789.15

**HHFDC ELECTRICAL CONSUMPTION DATA BY PROJECT** **FY - 2011**

**POHULANI**

**KWH**

**COSTS**

Appendix 7: Hawaii Housing Finance and Development Corporation Electrical Data

JULY		220,560		\$ 47,512.75
AUGUST		214,080		\$ 46,915.36
SEPTEMBER		207,600		\$ 46,022.27
OCTOBER		228,000		\$ 49,008.20
NOVEMBER		193,920		\$ 42,621.86
DECEMBER		201,120		\$ 43,908.94
JANUARY		203,520		\$ 45,612.02
FEBRUARY		192,240		\$ 44,828.49
MARCH		183,360		\$ 45,834.71
APRIL		197,040		\$ 50,403.13
MAY		178,800		\$ 48,759.11
JUNE		197,125		\$ 55,116.66
TOTALS		2,417,365		\$ 566,543.50

FY2011 GRAND TOTAL	<u>3,935,184</u>		<u>\$ 980,068.97</u>	
FY2008 Base Line Year (BLY)	4,781,493		\$ 1,036,663.37	
FY2009	4,061,936		\$ 921,821.94	
FY2010	4,172,621		\$ 896,281.49	
FY2011 w/%	<u>3,935,184</u>	17.70%	<u>\$ 980,068.97</u>	5.46%
Average Usage / Percentage to BLY	<u>4,056,580</u>	15.16%	<u>\$ 932,724.13</u>	10.03%

HHFDC USAGE & COST BY PROJECT

HONOKOWAI KAUAHALE	FY08	98,398		\$ 34,936.52	
	FY11	78,507	20.21%	\$ 30,007.51	14.11%
KAMAAINA HALE	FY08	35,489		\$ 13,695.24	
	FY11	34,325	3.28%	\$ 13,864.91	-1.24%
KAMAKEE VISTA	FY08	968,887		\$ 207,784.49	
	FY11	728,032	24.86%	\$ 178,730.05	13.98%
KAUHALE KAKAAKO	FY08	617,384		\$ 123,482.43	
	FY11	477,617	22.64%	\$ 110,949.31	10.15%
KEKUILANI COURTS	FY08	55,078		\$ 12,865.99	
	FY11	47,680	13.43%	\$ 13,005.27	-1.08%



Appendix 7: Hawaii Housing Finance and Development Corporation Electrical Data

KEKUILANI GARDENS	FY08	49,278		\$	12,109.66	
	FY11	42,810	13.13%	\$	12,090.60	0.16%
LAILANI	FY08	76,986		\$	38,516.38	
	FY11	73,106	5.04%	\$	38,088.67	1.11%
NANI O PUNA	FY08	48,473		\$	21,689.23	
	FY11	35,742	26.26%	\$	16,789.15	22.59%
POHULANI	FY08	2,831,520		\$	571,583.44	
	FY11	2,417,365	14.63%	\$	566,543.50	0.88%

Appendix 7: Hawaii Housing Finance and Development Corporation Electrical Data

HONOKOWAI KAUAHALE	FY08	98,398		\$	34,936.52	
	FY09	72,846	25.97%	\$	23,802.17	31.87%
	FY10	74,358	-2.08%	\$	23,967.15	-0.69%
	FY11					
KAMAAINA HALE	FY08	35,489		\$	13,695.24	
	FY09	34,307	3.33%	\$	14,067.14	-2.72%
	FY10	43,814	-27.71%	\$	18,084.74	-28.56%
	FY11					
KAMAKEE VISTA	FY08	968,887		\$	207,784.49	
	FY09	548,585	43.38%	\$	114,687.02	44.80%
	FY10	788,088	-43.66%	\$	174,622.97	-52.26%
	FY11					
KAUHALE KAKAAKO	FY08	617,384		\$	123,482.43	
	FY09	594,381	3.73%	\$	122,228.78	1.02%
	FY10	538,957	9.32%	\$	104,591.11	14.43%
	FY11					
KEKUILANI COURTS	FY08	55,078		\$	12,865.99	
	FY09	53,048	3.69%	\$	13,475.04	-4.73%
	FY10	50,642	4.54%	\$	11,851.76	12.05%
	FY11					
KEKUILANI GARDENS	FY08	49,278		\$	12,109.66	
	FY09	41,137	16.52%	\$	11,804.27	2.52%
	FY10	43,936	-6.80%	\$	10,921.68	7.48%
	FY11					
LAILANI	FY08	76,986		\$	38,516.38	
	FY09	76,775	0.27%	\$	36,696.70	4.72%
	FY10	72,569	5.48%	\$	35,158.98	4.19%
	FY11	73,106	-0.74%	\$	38,088.67	-8.33%
NANI O PUNA	FY08	48,473		\$	21,689.23	
	FY09	49,097	-1.29%	\$	22,441.02	-3.47%
	FY10	47,937	2.36%	\$	19,534.07	12.95%
	FY11					

Appendix 7: Hawaii Housing Finance and Development Corporation Electrical Data

POHULANI	FY08	2,831,520		\$ 571,583.44	
	FY09	2,591,760	8.47%	\$ 559,619.80	2.09%
	FY10	2,512,320	3.07%	\$ 497,549.03	11.09%
	FY11				

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YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
<b>HILO MEDICAL CENTER</b>									
2005	B617	CHEVY	VAN	1998	6,241	14 - 16 MPG	8,623	281	30.69
2005	B703	CHEVY	VAN	1997	9,495	14 - 16 MPG	1,037	78	13.29
2005	B704	CHEVY	VAN	1997	9,495	14 - 16 MPG	159	-	N/A
2006	C413	OLDSMOBILE	ALERO	2002	6,883	14 - 16 MPG	22,059	-	N/A
2006	C414	OLDSMOBILE	ALERO	2002	6,883	21 - 32 MPG	10,397	640	16.25
2006	C415	OLDSMOBILE	ALERO	2002	6,883	21 - 32 MPG	21,263	421	50.51
2007	C846	DODGE	STRATUS	2001	4,992	20 - 28 MPG	21,701	465	46.67
2007	C847	OLDSMOBILE	ALERO	2002	6,883	21 - 32 MPG	20,669	305	67.77
2007	C848	DODGE	INTREPID	2002	6,392	18 - 26 MPG	21,981	560	39.25
2008	D144	OLDSMOBILE	ALERO	2003	6,205	21 - 32 MPG	6,298	147	42.84

YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
<b>HALE HOOLA HAMAKUA</b>									
2010	SH 357	CHEVY	CLASSIC	2004	5,400	21 - 31 MPG	19,203	1185	16.20

YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
<b>KAU HOSPITAL</b>									
2004	SH 3539	FORD	TAURUS	2000	6,500	18 - 25 MPG	81,487	3542	23.00
2009	SH D887	CADILLAC	EL DORADO	2009	donation	15 - 24 MPG	5,167	322	16.00

YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
<b>MAUI MEMORIAL MEDICAL CENTER</b>									
1998	SHC627	Toyota	Camry	1998	13,866	17/25	87,523		Gas and mileage was not tracked per vehicle in this fiscal period. Total dollars expended in fuel for this fiscal period was \$30,702.
2001	SH7742	Toyota	Sienna Van	2000	23,877	16/22	68,621		
2006	SHC536	Chevrolet	Van	1999	4,500	12/16	34,902		
2008	SHD572	Ford	F-150 Pickup	2000	6,000	12/16	33,734		
2008	SHD573	Chevrolet	S-10 Pickup	2001	4,700	18/26	37,236		
2008	SHE281	Chevrolet	SUV Blazer	2002	1,500	14/18	48,653		
2008	SHC537	Oldsmobile	Alero	2002	5,000	21/30	25,489		
2008	SHD574	Oldsmobile	Alero	2002	5,000	21/30	37,969		
2008	SHD575	Oldsmobile	Alero	2003	5,500	21/30	24,719		
2010	MRT095	Ford	Aerotech Van	2007	5,208	N/A	104,687		

YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
2010	MRT095	Ford	Aerotech Van	2007	5,208	N/A	104,687		

KUALA HOSPITAL									
YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
1991	SH6494	GMC	2500 Truck	1989	16,127	15/19	Inoperable		
1992	SH5680	Chevrolet	Astro Van	1991	16,672	15/20	128,141		
1994	SH6495	Ford	F-350 Flatbed	1992	25,878	N/A	45,000		
1996	SH6866	Ford	Mini Bus	1994	42,566	14/18	92,417		
1998	SH8274	Chevrolet	3500 Flatbed	1995	27,799	N/A	871,310		
2000	SH8909	Chevrolet	1500 Van	1998	37,066	13/18	138,000		
2005	SH9845	Ford	Taurus Wagon	2000	21,875	17/25	76,096		
2006	SHB926	Ford	E-350 Van	2006	29,926	13/17	117,530		
2007	SHC538	Oldsmobile	Alero	2003	5,000	21/30	108,042		
2009	SHC682	Chevrolet	Entervan	2007	46,838	13/17	35,078		
2010	SHD576	Oldsmobile	Alero	2003	5,500	21/30	15,449		
2010	SHE177	Ford	E-350 Van	2005	19,980	22/25	60,573		
2010	SHE282	Ford	E-350 Van	2010	49,711	22/25	19,420		

Gas and mileage was not tracked per vehicle in this fiscal period.  
Total dollars expended in fuel for this fiscal period was \$15,585.

KAUAI VETERANS MEMORIAL HOSPITAL									
YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
1997	SH8537	CHEVY	PICKUP	2000	6,000	13- 18 MPG	N/A	252	N/A
2007	KYS891	NISSAN	ALTIMA	2007	24,000	19 - 27 MPG	3,582	115	31 MPG
2007	KYS901	NISSAN	ALTIMA	2007	5,000	19 - 27 MPG	9,641	240	40 MPG
2007	KYS893	NISSAN	QUEST	2007	24,730	16 - 23 MPG	10,555	517	20 MPG
2009	D954	DODGE	STRATUS	1999	4,500	20 - 28 MPG	1,932	128	15 MPG
2009	D950	DODGE	STRATUS	2002	5,000	20 - 28 MPG	N/A	293	N/A
2009	D952	CHEVY	S-10 PICKUP	1998	24,000	18 - 26 MPG	952	243	4 MPG
2009	D955	OLDSMOBILE	ALERO	2001	4,700	18 - 26 MPG	955	235	4 MPG
2010	KYR470	FORD	BUS	2005	27,000	13- 18 MPG	2,541	486	5 MPG

LEAHI HOSPITAL									
YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
2007	B297	DODGE	GREEN STRATUS	2000	5,000	20- 28 MPG	3,692	146	25 MPG
2007	C626	DODGE	BLUE STRATUS	2001	5,200	20- 28 MPG	2,269	194	12 MPG
2007	C771	DODGE	GOLD STRATUS	2001	5,000	20- 28 MPG	720	57	12 MPG

MALUHIA									
YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
2005	SHB687	CHEVY	ASTRO VAN	1998	5,500	14- 18 MPG	665	59	11 MPG
2007	SHC412	DODGE	STRATUS	2000	4,500	19- 27 MPG	321	55	6 MPG
2007	SHC812	FORD	TAURUS	2002	6,500	18- 25 MPG	714	47	15 MPG

Appendix 8: Hawaii Health Systems Corporation Vehicle Data

2008	SH8191	FORD	HANDI VAN	1998	DONATION	16- 23 MPG	488	96	5 MPG
2008	SHD390	CHEVY	TRUCK	2001	13,044	13- 17 MPG	337	116	3 MPG
2009	SHD432	CHEVY	SILVERADO	2008	28,919	15- 20 MPG	123	52	2 MPG
2009	SHE288	CHEVY	CLASSIC	2004	5,400	21 - 31 MPG	736	50	15 MPG
2009	SHE289	CHEVY	VENTURE	2002	5,600	16 - 22 MPG	1,040	117	9 MPG
2009	SHE290	CHEVY	VENTURE	2002	5,600	16 - 22 MPG	1,977	85	23 MPG

YEAR ACQUIRED	LICENSE PLATE	MAKE	MODEL	YEAR	ACQUISITION COST	RATED FUEL ECONOMY	ACTUAL MILEAGE	FUEL CONSUMPTION	AVG FUEL ECONOMY
KONA COMMUNITY HOSPITAL									
N/A	SHE158	DODGE	FLATBED TRUCK	2001	N/A	12- 16 MPG	5,708	439	13 MPG
N/A	SHD991	FORD	CARGO VAN	1986	N/A	8 - 12 MPG	5,678	630	9 MPG

## Hawaii State Public Library System LSS Delivery Vans 2010-2011 Figures

<b>Van ID</b>	<b>Gallons</b>	<b>Miles</b>	<b>MPG</b>
<b>Kauai SH B427 2004 Ford E150</b>	<b>988.4</b>	<b>15,860</b>	<b>16.04</b>
<b>Maui SH D871 2009 Chevy 3500</b>	<b>837.62</b>	<b>10,977</b>	<b>13.11</b>
<b>Hawaii SH C117 2006 Ford E250</b>	<b>1,176.05</b>	<b>16,382</b>	<b>13.93</b>
<b>Hawaii SH C118 2006 Ford E250</b>	<b>1,205.60</b>	<b>23,818</b>	<b>19.76</b>
<b>Oahu SH 8486 1997 Chevy 3500</b>	<b>289.3</b>	<b>3,785</b>	<b>13.06</b>
<b>Oahu SH D872 2009 Dodge 3500</b>	<b>107.20</b>	<b>858.0</b>	<b>8.0</b>
<b>Oahu SH B428 2004 Ford E150</b>	<b>873.12</b>	<b>9,273</b>	<b>10.62</b>
<b>Oahu SH B982 2006 Ford E350</b>	<b>1,346.99</b>	<b>15,692</b>	<b>11.65</b>
<b>Oahu SH D870 2009 Chevy 3500</b>	<b>1,144.67</b>	<b>15,477</b>	<b>13.52</b>
<b>Oahu SH 9502 1999 Ford E250</b>	<b>418.42</b>	<b>4,773</b>	<b>11.41</b>
<b>Totals</b>	<b>8,387.90</b>	<b>108,549.3</b>	<b>12.94</b>

## Hawaii State Public Library System ESSS/ASET Mini Vans 2010-2011 Figures

<b>Van ID</b>	<b>Gallons</b>	<b>Miles</b>	<b>MPG</b>
Hawaii SH9822 2001 Ford Windstar	382.47	6,743	17.63
Hawaii SHA315 2002 Chevy Astro	317.41	4120	12.98
Kahului SHA859 2004 Chevy Astro	529.23	6,753	12.76
Kauai SHB425 2004 Ford Freestar	571.93	7,355	12.86
Oahu SH9819 2001 Ford Windstar	508.88	8,015	15.75
Oahu SHB426 2004 Ford Freestar	837.55	11,508	13.74
Oahu SHB535 2005 Dodge GR Caravan	185.28	2,618	14.13
Oahu SHB960 2006 Ford Freestar	866.9	13,619	15.71
Oahu SHD881 2009 Dodge GR Caravan	317.57	3,887	12.24
<b>Totals</b>	<b>4517.22</b>	<b>64,618</b>	<b>14.2</b>



Appendix 10: Department of Public Safety Vehicle Data  
DEPARTMENT OF PUBLIC SAFETY  
2011 VEHICLES

VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
FORD EXPLORER XLT	05	1	Gasoline	14	20	19,875.50
CHEVY IMPALA	07	1	Gasoline	18	28	15,846.64
DODGE CARAVAN	07	2	Gasoline	17	24	16,396.38
CHEVY IMPALA 4DSD	04	1	Gasoline	17	23	8,300.00
FORD TAURUS 4DSD	06	1	Gasoline	20	27	11,670.15
CHEVY IMPALA 4DSD	04	1	Gasoline	17	23	8,500.00
JEEP CHEROKEE	98	1	Gasoline	18	20	6,000.00
VAN CHEVY- 12 PASSENGER	08	2	Gasoline	16	20	18,644.00
CHEVY VAN - 7 PASSENGER	08	2	Gasoline	19	25	24,732.00
VAN CHEVY ALUM HIGH CUBE	99	1	Gasoline	18	25	33,000.00
VAN CHEVY (15 PASSENGER)	06	2	Gasoline	16	20	38,737.08
VAN CHEVY (15 PASSENGER)	06	2	Gasoline	16	20	38,737.08
VAN FORD (15 PASSENGER)	99	2	Gasoline	14	19	5,500.00
VAN CHEVY (15 PASSENGER)	07	2	Gasoline	16	20	32,931.00
VAN FORD (15 PASSENGER)	01	2	Gasoline	14	19	9,500.00
VAN CHEVY (15 PASSENGER)	08	2	Gasoline	16	20	25,643.97
VAN DODGE (12 PASSENGER)	01	2	Gasoline	19	26	7,000.00
VAN DODGE (12 PASSENGER)	97	2	Gasoline	19	26	3,000.00
VAN FORD (7 PASSENGER)	03	2	Gasoline	14	19	5,800.00
VAN CHEVY (15 PASSENGER)	06	2	Gasoline	15	20	14,999.00
VAN CHEVY (7 PASSENGER)	05	2	Gasoline	16	20	8,200.00
VAN CHEVY (12 PASSENGER)	01	2	Gasoline	15	20	4,100.00
P/U CHEVY S-10	01	1	Gasoline	15	20	3,700.00
CHEVY SUBURBAN	96	1	Gasoline	12	16	1,275.24
FORD BUS	94	4	Gasoline	N/A	N/A	10,000.00
VAN FORD 138 ECONOLINE	97	2	Gasoline	15	20	17,985.37
VAN FORD ECONOLINE CARGO	99	2	Gasoline	15	20	22,654.64
VAN FORD	97	1	Gasoline	15	20	8,984.32
TRUCK CHEVY	91	2	Diesel	16	21	2,000.00
VAN FORD	99	1	Gasoline	15	20	5,000.00
VAN FORD (15 PASSENGER)	97	2	Gasoline	15	20	4,000.00
VAN CHEVY	97	2	Gasoline	16	20	5,000.00
VAN CHEVY	97	2	Gasoline	16	20	5,000.00
P/U FORD	08	1	Gasoline	14	20	20,560.00
VAN FORD	09	1	Gasoline	N/A	N/A	41,660.00
SDN TOYOTA COROLLA 4DR	03	1	Gasoline	30	38	14,895.74
FORD TAURUS 4DR	05	1	Gasoline	19	25	15,338.34
VAN DODGE	90	1	Gasoline	19	26	800.00
SDN CHEVY 4DSD CAPRICE	90	1	Gasoline	18	26	2,500.00
SDN CHEVY CAPRICE	90	1	Gasoline	18	26	13,821.00
BUS CHEVY (60 PASSENGER)	87	N/A	N/A	N/A	N/A	22,000.00
SDN CHEVY CAPRICE	92	1	Gasoline	18	26	15,039.17
S/W CHEVY	94	1	Gasoline	23	30	24,990.83
SDN OLDS CIERA	96	1	Gasoline	17	26	14,720.06
VAN FORD AEROSTAR	97	1	Gasoline	17	23	17,232.72
SDN CHEVY CORSICA	95	1	Gasoline	24	31	6,300.00
SUV FORD BRONCO 2DR	92	2	Gasoline	14	18	19,739.65
SDN CHEVY CORSICA	95	1	Gasoline	24	31	6,300.00

Appendix 10: Department of Public Safety Vehicle Data  
DEPARTMENT OF PUBLIC SAFETY  
2011 VEHICLES

VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
VAN FORD CARGO	81	1	Gasoline	17	23	1,000.00
TRUCK CHEVY S-10	94	1	Gasoline	15	20	5,000.00
P/U TRUCK CHEVY	94	1	Gasoline	15	20	5,000.00
VAN CHEVY	94	2	Gasoline	16	20	5,200.00
VAN CHEVY (15 PASSENGER)	03	3	Gasoline	13	16	28,925.00
P/U DODGE	96	1	Gasoline	13	17	4,200.00
VAN FORD 3 DR E-350 (15 PASSENGER)	03	2	Gasoline	N/A	N/A	22,739.23
P/U TRUCK CHEVY	91	1	Gasoline	15	20	61,817.70
CHEVY IMPALA 4DSD	07	1	Gasoline	18	28	21,300.00
VAN CHEVY	07	1	Gasoline	16	20	30,820.00
VAN CHEVY	07	2	Gasoline	16	21	30,820.00
VAN FORD	08	1	Gasoline	15	20	30,820.00
VAN FORD	08	1	Gasoline	15	20	30,820.00
VAN FORD (12 PASSENGER)	08	2	Gasoline	16	21	23,933.64
P/U CHEVY	82	1	Gasoline	20	26	2,500.00
VAN CHEVY	93	2	Gasoline	16	20	2,500.00
P/U DODGE	86	1	Gasoline	13	17	750.00
VAN CHEVY (12 PASSENGER)	92	2	Gasoline	16	20	5,000.00
P/U TRUCK DODGE	82	1	Gasoline	13	17	3,000.00
VAN CHEVY	98	2	Gasoline	16	21	26,380.00
VAN CHEVY	98	2	Gasoline	16	21	26,380.00
VAN GMC	89	2	Gasoline	13	15	5,000.00
SDN CHEVY 4DR	87	1	Gasoline	23	32	12,000.00
P/U TRUCK CHEVY	78	1	Gasoline	13	17	1,500.00
P/U CHEVY	87	1	Gasoline	20	26	11,000.00
SDN CHEVY 4DR	87	1	Gasoline	23	32	12,000.00
CHEVY BUS (20 PASSENGER)	94	2	Gasoline	N/A	N/A	2,500.00
VAN CHEVY - 12 PASSENGER	08	2	Gasoline	16	21	24,732.00
DODGE INTREPID	02	1	Gasoline	21	30	2,500.00
VAN CHEVY (12 PASSENGER)	97	2	Gasoline	16	20	28,344.00
TRUCK CHEVY CREW CAB	98	2	Gasoline	13	16	28,600.00
VAN CHEVY (15 PASSENGER)	98	2	Gasoline	16	21	28,810.00
VAN CHEVY (12 PASSENGER)	97	2	Gasoline	16	21	28,344.00
VAN CHEVY (12 PASSENGER)	08	2	Gasoline	16	21	23,933.64
CHEVY MALIBU SDN	09		Gasoline	23	32	19,695.00
VAN TOYOTA SIENNA	05	1	Gasoline	18	24	24,036.31
TOYOTA CAMRY	07	1	Gasoline	24	34	21,821.69
VAN CHEVY EXPRESS (15 PASSENGER)	98	2	Gasoline	16	22	28,810.00
SDN CHEVY MALIBU	99	1	Gasoline	23	32	18,452.70
VAN CHEVY EXPRESS	99	2	Gasoline	16	20	29,432.28
SDN FORD MERCURY 4DR	99	1	Gasoline	25	34	18,373.00
VAN CHEVY (15 PASSENGER)	01	2	Gasoline	16	22	28,875.00
TOYOTA TACOMA	06	1	Gasoline	20	27	22,942.28
SUV FORD EXPEDITION	98	1	Gasoline	11	15	30,042.48
FORD F-150 PKUP	02	1	Gasoline	17	22	12,965.00
INFINITI G35	03	1	Gasoline	19	26	3,177.77
HONDA ODYSSEY	07	2	Gasoline	16	23	32,240.00
MINI COOPER S	05	1	Gasoline	25	32	21,725.00

Appendix 10: Department of Public Safety Vehicle Data  
DEPARTMENT OF PUBLIC SAFETY  
2011 VEHICLES

VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
VAN TOYOTA SIENNA (7 PASSENGER)	04	1	Gasoline	19	27	26,000.00
CROWN VICTORIA FORD	10	1	Gasoline	18	25	25,538.86
P/U FORD F-150	10	1	Gasoline	19	25	N/A
EXPLORER FORD	10	1	Gasoline	14	20	22,720.96
FUSION HYBRID FORD	10	1	Gasoline	N/A	N/A	29,075.00
TOYOTA 4RUNNERMPVH	06	1	Gasoline	18	22	33,419.33
SUV CHEVY TAHOE	99	2	Gasoline	12	16	31,600.00
SDN TOYOTA COROLLA	03	1	Gasoline	30	38	14,895.74
FORD TAURUS	05	1	Gasoline	19	25	14,941.91
VAN CHEVY	92	2	Gasoline	16	20	16,737.50
S/W FORD	92	1	Gasoline	15	21	18,260.48
P/U TRUCK CHEVY 1/2	93	1	Gasoline	15	20	13,198.00
VAN FORD	90	1	Gasoline	15	20	35,617.82
SDN CHEVY CELEBRITY 4DR	89	1	Gasoline	23	30	4,850.00
SDN OLDS CIERA 4DR	94	1	Gasoline	17	26	13,436.50
VAN CHEVY ASTRO WHITE	92	2	Gasoline	15	20	14,629.87
P/U FORD	00	1	Gasoline	15	20	14,127.51
SDN CHEVY	86	1	Gasoline	18	26	9,410.85
VAN DODGE	87	2	Gasoline	19	26	3,000.00
P/U TRUCK FORD	88	1	Gasoline	15	20	13,763.00
OLDS SDN	95	1	Gasoline	19	25	16,539.95
VAN CHEVY ASTRO WHITE	88	2	Gasoline	18	20	13,495.00
P/U DODGE	91	2	Gasoline	13	17	5,600.00
VAN CHEVY (15 PASSENGER)	98	2	Gasoline	16	21	24,995.00
VAN CHEVY (15 PASSENGER)	98	2	Gasoline	16	21	24,995.00
VAN GMC (15 PASSENGER)	00	2	Gasoline	N/A	N/A	24,999.84
VAN CHEVY (15 PASSENGER)	02	2	Gasoline	16	21	27,740.00
VAN CHEVY (15 PASSENGER)	98	2	Gasoline	16	21	24,995.00
CHEVY LUMINA	99	1	Gasoline	20	29	4,000.00
VAN CHEVY (15 PASSENGER)	98	2	Gasoline	16	21	24,995.00
VAN FORD - 12 PASSENGER	08	2	Gasoline	14	19	23,933.64
VAN FORD - 12 PASSENGER	08	2	Gasoline	14	19	23,933.64
CHEVY BUS (20 PASSENGER)	94	N/A	N/A	N/A	N/A	2,500.00
SDN CHEVY CELEBRITY 4DR	89	1	Gasoline	23	30	2,000.00
SDN CHEVY CAPRICE 4DR	92	1	Gasoline	18	26	3,000.00
SDN CHEVY CAPRICE 4DR	92	1	Gasoline	18	26	2,500.00
SDN CHEVY CAPRICE 4DR	92	1	Gasoline	18	26	2,500.00
SDN CHEVY CAPRICE 4DR	92	1	Gasoline	18	26	2,500.00
P/U TRUCK CHEVY 2500	88	1	Gasoline	20	26	1,144.00
P/U TRUCK CHEVY S-10	91	1	Gasoline	15	20	1,500.00
SUV CHEV BLAZER	93	2	Gasoline	13	16	500.00
SDN CHEVY LUMINA 4DR	93	1	Gasoline	20	29	7,713.57
TOYOTA TACOMA PKUP TRUCK	98	1	Gasoline	20	27	7,100.00
FORD TAURUS 4DR SDN	05	1	Gasoline	19	25	14,941.91
P/U TOYOTA TACOMA	04	1	Gasoline	20	27	3,567.71
VAN DODGE	90	1	Gasoline	19	26	2,500.00
SDN CHEVY 4DR	90	1	Gasoline	23	32	2,500.00
SDN CHEVY 4DR	90	1	Gasoline	23	32	2,500.00

Appendix 10: Department of Public Safety Vehicle Data  
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VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
SDN CHEVY 4DR	90	1	Gasoline	23	32	2,500.00
SDN CHEVY 4DR	91	1	Gasoline	23	32	3,000.00
VAN CHEVY	83	2	Gasoline	16	20	7,383.42
FORD TAURUS	93	1	Gasoline	19	25	15,713.59
SDN PONTIAC GRAND PRIX 4DR	94	1	Gasoline	19	28	13,039.67
SDN PONTIAC GRAND PRIX 4DR	94	1	Gasoline	19	28	825.00
SDN FORD CROWN VICTORIA 4DR	95	1	Gasoline	18	25	17,450.00
SDN FORD CROWN VICTORIA	97	1	Gasoline	18	25	8,000.00
VAN CARGO FORD	86	2	Gasoline	15	20	1,283.54
SDN FORD CROWN VICTORIA	99	1	Gasoline	18	25	33,736.24
SDN FORD CROWN VICTORIA	99	1	Gasoline	18	25	33,736.24
SDN CHEVY CAPRICE 4DR	93	1	Gasoline	18	26	3,000.00
SDN DODGE DIPLOMAT FD	85	1	Gasoline	16	21	1,500.00
SDN CHEVY CAPRICE 4DR	91	1	Gasoline	18	26	2,500.00
VAN FORD AEROSTAR	93	1	Gasoline	15	20	825.00
VAN FORD AEROSTAR	93	1	Gasoline	15	20	825.00
VAN CHEVY (12 PASSENGER)	01	2	Gasoline	16	21	27,865.00
VAN CHEVY (12 PASSENGER)	01	2	Gasoline	16	21	27,865.00
VAN CHRYSLER VOYAGER	00	2	Gasoline	16	22	16,666.66
FORD TAURUS 4DSD	01	1	Gasoline	19	25	14,790.72
BUS FORD	96	N/A	N/A	N/A	N/A	55,617.00
SDN FORD CROWN VICTORIA	02	1	Gasoline	17	25	22,363.80
SDN FORD CROWN VICTORIA	02	1	Gasoline	17	25	22,363.81
P/U TRUCK FORD RANGER	02	1	Gasoline	17	22	14,000.00
P/UP FORD RANGER	00	1	Gasoline	17	22	13,720.00
VAN CHEVY	03	2	Gasoline	16	20	37,770.42
CROWN VICTORIA FORD	03	1	Gasoline	18	25	23,716.16
FORD CROWN VICTORIA POLICE INTER	00	1	Gasoline	16	20	8,000.00
CHEVY CAPRICE SEDAN	93	1	Gasoline	18	26	300.00
CHEVY IMPALA POLICE INTERCEPTOR	01	1	Gasoline	20	30	2,500.00
CHEVY IMPALA POLICE INTERCEPTOR	01	1	Gasoline	20	30	3,200.00
SDN FORD CROWN VICTORIA	02	1	Gasoline	18	25	8,000.00
CHEVY 4DSD IMPALA	02	1	Gasoline	19	29	3,200.00
CHEVY 4DSD IMPALA	02	1	Gasoline	21	32	2,500.00
SDN FORD CROWN VICTORIA	04	1	Gasoline	18	25	4,000.00
DODGE VAN (7 PASSENGER)	10	1	Gasoline	17	24	28,545.00
DODGE VAN (7 PASSENGER)	10	1	Gasoline	17	24	28,545.00
JEEP MPVH	95	1	Gasoline	18	20	17,593.82
SDN FORD CROWN VICTORIA	99	1	Gasoline	17	25	35,744.56
SUV CHEVY TAHOE	99	2	Gasoline	12	16	44,828.11
FORD ECONOLINE CLUB VAN	05	1	Gasoline	15	20	32,873.36
FORD ECONOLINE CLUB VAN	05	1	Gasoline	15	20	32,873.36
FORD CROWN VICTORIA	05	1	Gasoline	18	25	34,634.86
SDN FORD CROWN VICTORIA	03	1	Gasoline	18	25	4,000.00
FORD TAURUS 4DR SDN	05	1	Gasoline	19	25	14,941.91
FORD EXPLORER SUV 2WHEEL DR	05	1	Gasoline	14	20	22,184.80
SDN FORD CROWN VICTORIA	99	1	Gasoline	18	25	34,211.24
SDN FORD CROWN VICTORIA	03	1	Gasoline	18	25	30,238.05

Appendix 10: Department of Public Safety Vehicle Data  
DEPARTMENT OF PUBLIC SAFETY  
2011 VEHICLES

VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
CHEVY IMPALA	03	1	Gasoline	21	32	3,500.00
P/U TRUCK DODGE RAMCHARGER	91	1	Gasoline	13	17	3,000.00
SDN FORD CROWN VICTORIA 4DR	00	1	Gasoline	18	25	31,876.88
CHEVY IMPALA POLICE INTERCEPTOR	01	1	Gasoline	16	20	7,500.00
FORD CROWN VICTORIA	05	1	Gasoline	18	25	38,773.77
FORD CROWN VICTORIA	05	1	Gasoline	18	25	38,773.77
SDN FORD CROWN VICTORIA	99	1	Gasoline	18	25	34,211.24
SDN FORD CROWN VICTORIA	00	1	Gasoline	18	25	30,238.05
VAN CHEVY ASTRO PASS	94	2	Gasoline	16	20	8,000.00
FORD BRONCO	92	1	Gasoline	14	18	11,000.00
SDN CHEVY IMPALA 4 DR	00	1	Gasoline	19	29	7,739.43
SDN CHEVY IMPALA 4 DR	00	1	Gasoline	19	29	7,739.43
CHEVY PVAN	99	1	Gasoline	16	20	4,000.00
FORD VAN - 7 PASSENGER	01	1	Gasoline	17	22	7,000.00
SDS OLDS 4DSD	02	1	Gasoline	19	25	4,500.00
SDS DODGE 4DSD	04	1	Gasoline	19	25	6,700.00
SDS DODGE 4DSD	04	1	Gasoline	19	25	6,700.00
P/U CHEVY	01	1	Gasoline	15	20	4,500.00
CHEVY VAN - 7 PASSENGER	01	1	Gasoline	19	25	24,732.00
SDS FORD 4DSD	99	1	Gasoline	19	25	28,542.00
SDS FORD 4DSD	99	1	Gasoline	19	25	28,542.00
SDS FORD 4DSD	00	1	Gasoline	19	25	25,858.00
SDN CHEVY CORSICA	90	1	Gasoline	24	31	5,550.00
VAN CHEVY ASTRO	88	2	Gasoline	18	20	5,400.00
BUS CHEVY (15 PASSENGER)	91	2	Gasoline	16	21	18,200.00
VAN FORD WINDSTAR	98	1	Gasoline	18	25	18,846.10
P/UP CHEVY	00	1	Gasoline	15	20	29,530.00
BUS FORD CHAMPION (14 PASSENGER)	97	2	Gasoline	N/A	N/A	3,500.00
ECONOLINE FORD 15 PASS CLUB WAGON	05	2	Gasoline	19	19	22,354.80
FORD TRUCK	06	1	Gasoline	21	26	13,898.31
MAZDA TRUCK	00	1	Gasoline	15	19	11,101.00
VAN FORD	07	1	Gasoline	15	20	19,156.14
VAN CHEVY (7 PASSENGER)	09	1	Gasoline	19	25	29,373.00
VAN CHEVY (7 PASSENGER)	03	1	Gasoline	16	20	29,373.00
VAN CHEVY ASTRO	92	1	Gasoline	15	19	6,879.65
SUV CHEVY (15 PASSENGER)	92	2	Gasoline	16	21	23,341.65
SUV CHEVY S10 BLAZER	92	1	Gasoline	13	16	5,000.00
VAN CHEVY	92	1	Gasoline	16	20	7,000.00
P/U CHEVY	87	1	Gasoline	15	20	5,000.00
P/U CHEVY	73	1	Gasoline	15	20	2,500.00
S/W GMC	86	1	Gasoline	15	21	2,500.00
P/U TRUCK DODGE RAM CHARGER	87	1	Gasoline	13	17	5,000.00
VAN CHEVY (7 PASSENGER)	95	1	Gasoline	15	20	30,932.39
SUV FORD BRONCO	88	2	Gasoline	14	18	15,000.00
P/U CHEVY K-20 4X4	98	1	Gasoline	15	20	24,185.20
P/U CHEVY K-20 4X4	98	1	Gasoline	15	20	24,185.20
P/U CHEVY S-10	98	1	Gasoline	15	20	15,439.95
P/U CHEVY S-10	98	1	Gasoline	15	20	15,439.95
P/U CHEVY S-10	98	1	Gasoline	15	20	15,439.95
VAN CHEVY EXPRESS	98	2	Gasoline	16	20	24,995.00

Appendix 10: Department of Public Safety Vehicle Data  
 DEPARTMENT OF PUBLIC SAFETY  
 2011 VEHICLES

VEHICLE DESCRIPTION	MODEL YEAR	GROSS VEHICLE WEIGHT RATING	VEHICLE FUEL CONFIGURATION	CITY MPG	HWY MPG	ACQUISITION COST
VAN CHEVY EXPRESS	98	2	Gasoline	16	20	24,995.00
TRUCK DODGE FLTBD	87	2	Gasoline	N/A	N/A	1,200.00
P/U FORD	08	1	Gasoline	14	20	20,560.00
FRHT FORD BUS (22 PASSENGER)	96	8	Gasoline	N/A	N/A	10,000.00
FORD BUS (28 PASSENGER)	99	8	Gasoline	N/A	N/A	15,000.00

Department of Public Safety  
FY11 Fuel Report

PROGRAM	COST OF FUEL
Non-State Facilities	\$432.00
HCCC	\$48,531.00
MCCC	\$6,685.00
OCCC	\$44,048.00
WCCC	\$18,987.00
Intake Service	\$1,892.00
Sheriff	\$135,300.00
Admin	\$12,684.00
HCF	\$20,011.00
WCF	\$28,107.00
KCCC	\$11,311.00
CSP	\$37,019.00
Health care	\$430.00
NED	\$10,825.00
HPA	
<b>Total</b>	<b>\$376,262.00</b>